

# The Mining Journal

## RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The Mining Journal is Registered at the General Post Office as a Newspaper and for Transmission Abroad.]

No. 2476.—Vol. LIII.

LONDON, SATURDAY, FEBRUARY 3, 1883.

[WITH SUPPLEMENT.] {PRICE ..... SIXPENCE  
BY POST, £1 4s PER ANNUM

**MR. JAMES H. CROFTS, STOCK AND SHARE BROKER**  
AND MINING SHARE DEALER.  
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.  
ESTABLISHED 1842.

BUSINESS transacted in all descriptions of MINING Stocks and Shares  
British and Foreign, Consols, Banks, Bonds (Foreign and Colonial), Rail-  
ways, Insurance, Assurance, Telegraph, Tramway, Shipping, Canal, Gas,  
Water, and Dock Shares, and all Miscellaneous Shares.

BUSINESS negotiated in Stocks and Shares not having a general market  
value.

Every Friday a general and reliable List issued (a copy of  
which will be forwarded on application), containing closing  
prices of the week.

MINES INSPECTED.  
BANKERS: CITY BANK, LONDON—SOUTH CORNWALL BANK, ST. AUSTELL.  
TELEPH. No. 1003.

**SPECIAL DEALINGS** in the following, or part:—  
50 Almaden, 15s. 6d. 100 Herodfoot, 20s. 6d.  
50 Bedford United, £1 12s. 9d. 100 Indian Consols, 7s. 3d.  
50 Bessing, 3s. 6d. 75 Indian Glenrock, 12s. 6d.  
50 Carnarvon Cop., 7s. 6d. 25 Indian Phoenix, 13s. 6d.  
50 Callao Bis., £1 1s. 50 Indian Trevelyan, 8s. 6d.  
50 Oute Gold, 13s. 50 Kapanga, 17s. 6d.  
100 Calomian Hyd., 6s. 3d. 25 Killifreth, 23s. 6d.  
30 Consolidated, 5s. 50 La Plata, 15s. 6d.  
50 California, 20s. 3d. 100 New Caradon, 7s. 6d.  
75 Devela Con., 7s. 50 Last Chance, 5s. 6d.  
50 Devela Moyer, 12s. 25 Leadhills, £2 15s.  
20 D'Ersby Mount, 15s. 25 Marke Valley, 10s. 6d.  
25 Devon Consols, £5 13s. 9d. 100 Mona, £4.  
50 Devon Friend., 6s. 100 Mounts Bay, 10s. 6d.  
75 Don Pedro, 3s. 25 Morfa Du, 5s.  
50 Drakeville, 7s. 6d. 50 Mysoore Gold, 10s. 6d.  
50 East Blue Hills, 7s. 9d. 100 New Caradon, 7s. 6d.  
50 Eberhardt, 12s. 6d. 50 No. Blue Hills, 2s. 3d.  
20 East Caradon, £1 1/4. 50 North Penstru, 10s. 6d.  
50 East Chiverton, 2s. 3d. 35 New W. Caradon, 8s. 6d.  
25 East Lovell, 2s. 3d. 50 Old Shepherds, 20s. 6d.  
50 E. Roman Grav., 2s. 3d. 15 Organo, £2 10s.  
50 East Wheel Rose, 10s. 6d. 10 do 15 p.c. Debs., £5  
25 Frontino, £2 15s. 3d. paid, £4 1/4.  
20 Goggin, 19s. 3d. 30 Orita, 10s. 6d.  
50 Gold Coast, 19s. 6d. 25 Polrose, 5s.  
25 Grogwinion, 15s. 6d. 25 Penhall, 5s.  
50 Gawton, 9s. 50 Port Phillip, 3s. 6d.  
20 Gunguis, (Clit.), £2 1/4. 50 W. Caradon, 7s. 6d.  
25 Hingston, 10s. 6d. 50 W. Caradon, 7s. 6d.  
50 Hoover Hill, 3s. 6d. 50 W. Caradon, 7s. 6d.  
50 Hoover Hill, 3s. 6d. 50 W. Caradon, 7s. 6d.

SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE  
MONTHS) ON DEPOSIT OF TWENTY PER CENT.

SPECIAL BUSINESS at CLOSE PRICES in all Market WIN, COPPER  
AND LEAD SHARES.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

**RAILWAYS—SPECIAL BUSINESS.**—Fortnightly Accounts  
opened on receipt of the usual cover.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

**FOREIGN BONDS—SPECIAL BUSINESS.**—Fortnightly  
Accounts opened on receipt of the usual cover.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

**AMERICAN AND CANADIAN STOCKS AND SHARES—  
SPECIAL BUSINESS.**

Fortnightly Accounts opened on receipt of the usual cover.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

**INDIAN GOLD MINES.—SPECIAL BUSINESS in:—**

Devela Moyer, Indian Phoenix, Rhodes Reef,  
Devela Central, Indian Kingdon, South-East Wynaad,  
Indian Consolidated, Indian Trevelyan, Tambracherry,  
Indian Glenrock, Mysore, Wynaad Perseverance,  
Oreogum.

At CLOSE MARKET PRICES, free of commission.

\* Reliable information given on any of the above. A daily price list issued  
giving closing quotations. SPECIAL BUSINESS in California, La Plata, Rio  
Tinto, Frontino and Bolivia, Potosi, Chile, Nouveau Monde, Ruby, Richmond.

\* SHARES IN THE ABOVE INDIAN OR OTHER GOLD AND SILVER  
MINES SOLD FOR FORWARD DELIVERY ONE, TWO, OR THREE  
MONTHS ON DEPOSIT OF TWENTY PER CENT.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

ESTABLISHED 1842.

**ELECTRIC LIGHT SHARES—SPECIAL BUSINESS.**

Maxim-Weston, Anglo-American Brush, Pilsen-Joel,  
Jablochhoff, Midland Brush, Hammond,  
Devon and Cornwall, Metropolitan Brush, Galcher, Sellen's,  
Shares sold for cash, account, or for forward delivery (one, two, or three  
months) on deposit of 20 per cent.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

**EAST WHEEL ROSE, OLD SHEPHERDS, MOUNTS BAY,  
TRESAVEAN.**

SPECIAL BUSINESS at closest market prices, net.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

**MR. W. H. BUMPUS, STOCK AND SHARE BROKER,  
AND MINING SHARE DEALER.**

44, THREADNEEDLE STREET, LONDON, E.C.

ESTABLISHED 1867.

BUSINESS transacted in STOCK EXCHANGE SECURITIES  
AND MISCELLANEOUS SHARES of every description.

RAILWAYS, BANKS, FOREIGN AND COLONIAL BONDS,  
TRAMWAYS, TELEGRAPHS, and all the LEADING INVESTMENTS.

Accounts opened for the Fortnightly Settlement

A List of Investments free on application.

MR. BUMPUS has SPECIAL BUSINESS in the undermentioned:—

50 Almaden, 15s. 3d. 25 Great Holway, 100 North Blue Hills, 2s.  
50 Bratsberg, 3s. 6d. 50 Grogwinion, 100 Old Shepherds, 20s. 6d.  
25 Bedford United, 3s. 6d. 50 Hingston Down, 8s. 6d.  
50 Carn Camborne, 15s. 6d. 50 Herodfoot, 20s. 6d.  
75 Carnarvon Cop., 7s. 6d. 10 Hornachos, £5 1/4.  
15 Chilopio, £3 13s. 9d. 50 Indian Phoenix, 13s. 6d.  
100 Chile Gold, 17s. 6d. 100 Indian Trevelyan, 8s. 6d.  
100 Callao Bis., 2s. 6d. 100 Indian Consolidated, 7s. 6d.  
100 California Gold, 20s. 6d. 100 Indian Glenrock, 12s. 6d.  
100 Colombian Hyd., 6s. 3d. 500 I. X. L. Gold, 2s. 3d.  
30 Don Pedro, 3s. 6d. 25 Kapanga, 17s. 6d.  
100 Drakeville, 7s. 6d. 25 Killifreth, 23s. 6d.  
100 Devela Central, 5s. 9d. 50 Kohinoor B., 21s. 6d.  
75 Devela Moyer, 12s. 6d. 30 La Plata, 15s. 6d.  
15 Devon Cons., £5 1/4. 100 Last Chance, 5s. 6d.  
100 Devon Friend., 6s. 100 Langford, 10s. 6d.  
50 East Blue Hills, 7s. 9d. 100 Marke Valley, 10s. 6d.  
75 Eberhardt, 12s. 6d. 100 Mounts Bay, 10s. 6d.  
35 East Caradon, 8s. 6d. 100 Michipicoten, 10s. 6d.  
150 Exchequer Gold, 2s. 3d. 100 Mona, 10s. 6d.  
100 East Wheel Rose, 10s. 6d. 150 Mysoore Gold, 10s. 6d.  
20 East Lovell, 2s. 3d. 25 New Kitty, 42s. 6d.  
40 Frontino, £2 15s. 3d. 25 New West Caradon, 8s. 6d.  
100 Gold Coast, 19s. 6d. 150 Nouveau Monde, 8s. 6d.  
50 Goggin, 19s. 3d. 30 New Caradon, 7s. 6d.  
30 Gunguis, (Clit.), £2 1/4. 50 New Trumpet Cons., 10s. 6d.

Where prices are not inserted, offers may be made.

SPECIAL BUSINESS, at close prices, in the SHARES of all the principal  
HOME AND FOREIGN MINES.

\* Investors and others will do well just now to turn their attention to  
shares in SOUND DIVIDEND AND PROGRESSIVE MINES, many of which  
may be bought at very low prices, and are likely to improve considerably  
in value within the next few months.

The present is a very favourable opportunity for securing CHEAP SHARES.

MR. BUMPUS devotes special attention to these Securities, and is in a position  
to afford reliable information and advice to intending investors and others.

WILLIAM HENRY BUMPUS, STOCK BROKER,  
OFFICE: 44, THREADNEEDLE STREET, LONDON, E.C.

ESTABLISHED 1867.

**BRITISH AND FOREIGN MINING OFFICES.**

Messrs. PETER WATSON AND CO.,

18, AUSTIN FRIARS,

OLD BROAD STREET, LONDON, E.C.

BANKERS: THE ALLIANCE BANK (Limited).

**Messrs. PETER WATSON AND CO.'S**

BRITISH AND FOREIGN MONTHLY MINING NEWS

—STOCK AND SHARE INVESTMENT NOTES—MINES,

MINERALS, AND METAL MARKETS—SHARE LIST,

No. 849, Vol. XVII., for JANUARY month, is ready, and will  
be sent to customers on application.

Annual Subscription..... 5s. Single Copy..... 6d.

NOTICE TO SUBSCRIBERS.

In February Monthly Circular some important information will be given re-  
garding the present position and future prospects of our Home Dividend and  
Progressive Tin, Copper, and Lead Mines, and as to the Buying or Selling  
Shares in the same.

**MR. ALFRED E. COOKE,**

DEALER IN BRITISH AND FOREIGN STOCKS AND SHARES

OF EVERY DESCRIPTION.

(FROM 76, OLD BROAD STREET)

ESTABLISHED 1853.

9, OLD BROAD STREET, LONDON.

**STOCKS AND SHARES FOR SALE.**

Mr. ALFRED E. COOKE can SELL the following lots (or any smaller  
number of shares) to immediate applicants at prices annexed, free of  
commission:—

Where prices are not inserted, the market price of the day will be  
taken, or offers may be made:—

100 Almaden Silver, 16s. 20 Mounts Bay Consols, 100 South-East Wynaad  
45 Bratsberg Cop., 38s. 25 New Kitty Tin, £2 1/4 Gold, 16s. 3d.  
50 Callao Bis. Gold, 50 New West Caradon, 80 Sortridge Copper and  
60 Colombian Hydraulic 100 Nouveau Monde Gold, 20s. 6d.  
Gold, 6s. 50 N. Caradon Cop., 6s. 9d. 20 Silver Hill, 10s.  
25 Carn Camborne Tin & 100 Nouveau Monde Gold, 20s. 6d.  
Copper, 50 North Blue Hills, 2s. 3d. 25 South Darren Silver-  
100 Devon Friend., 5s. 9d. 60 Old Shepherds Lead, 17s. 6d.  
60 East Rose Lead, 60 Organo, £2 10s. 50 Tanker, 7s. 6d.  
100 E. Blue Hills Tin, 7s. 3d. 20 Orita Gold, 50 Treavean Copper &  
20 E. Caradon Cop., 25s. 10 North Grogwinion 50 Victoria Gold, 20s.  
80 Eberhardt Sil., 12s. Lead, 15s. 50 W. Crebor Cop., 7s. 6d.  
25 Frongoch Lead, 50 Parys Copper, 6s. 20 W. Caradon Cop., £1 1/4  
40 Goggin Lead, 17s. 6d. 60 Prince of Wales, 7s. 6d. 20 W. Polbreon Tin, 15s. 6d.  
20 Herodfoot, 3s. 6d. 60 W. Caradon Cop., 25s. 6d. 20 W. Polbreon Tin, 15s. 6d.  
20 La Plata Lead, 17s. 6d. 20 Potosi Gold, 11s. 3d. 30 Wheal Jane Tin.  
30 Leadhills, £2 1/4. 20 Richmond Silver, 7s. 6d. 15 Wh. Crebor Cop., £2 1/4  
50 Langford Silver, 10s. 20 Ruby, £1 7s. 6d. 50 West Devon Copper.

Many of the above shares can be sold for settlement by arrangement at the  
middle or end of March account on payment of 20 per cent. deposit. Shares  
not found in the above list may be purchased on application.

DULL MARKETS.—INVESTORS are strongly advised to make purchases at  
once in order to realise profits when an advance sets in.

CHEAP SHARES.—THE FOLLOWING SHARES are recommended for an  
early advance:—Devon Friendship, East Blue Hills, Eberhardt, Goggin, Lang-  
ford, Nouveau Monde, Prince of Wales, South Darren, Sortridge, West Crebor,  
Wheal Crebor, and West Devon.

SHARES IN THE ABOVE MINES can be PURCHASED AT LOWEST POSSIBLE  
PRICE on application to

ALFRED E. COOKE, 9, OLD BROAD STREET, LONDON.

**INVESTORS who REQUIRE an ACCURATE PRICE LIST**

should send for that issued by

ALFRED E. COOKE, 9, OLD BROAD STREET, LONDON.

**PRICES of every description of STOCKS and SHARES are**

received continuously throughout the day by TELEGRAPH from the  
STOCK EXCHANGE.

MR. ALFRED E. COOKE'S OFFICES are connected by TELEPHONE with the  
Subscribers to the United Telephone Company, whereby INSTANTANEOUS  
COMMUNICATION can be established in all parts of London. TELEPHONE  
NUMBER, 1265.

ALFRED E. COOKE, 9, OLD BROAD STREET, LONDON.

(Opposite the Stock Exchange, with which the offices are in DIRECT  
TELEGRAPHIC COMMUNICATION.)

**MR. JAMES STOCKER, STOCKBROKER,**

2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.

Has special business in the following for cash or settlement by arrangement:—

Akankoo, 8s. 9d. Gawton, 9s. 9d. Prince of Wales, 7s. 6d.  
Almaden, 15s. 6d. Indian Phoenix, 12s. 6d. Richmond, 27s. 6d.  
Bratsberg, 38s. 6d. Indian Trevelyan, 8s. 9d. Rhodes Reef, 10s. 3d.  
Callao Bis., 2s. 6d. Kapanga, 17s. 6d. Ruby, 30s.  
Callao Bis., 2s. 6d. La Plata, 15s. 6d. Sortridge, 4s. 9d.  
Carn Camborne, 15s. 6d. Marke Valley, 10s. 6d. Treavean.  
Chile Gold, 17s. 6d. Mounts Bay, 10s. 6d. Tolima A., £6 1/4.  
Cliters, £2 1/4. New Kitty, 42s. 6d. Tolima B.  
Colombian, 6s. North Blue Hills, 2s. 3d. Victoria Gold, 15s.  
Devon Friendship, 5s. 9d. Nouveau Monde, 7s. 6d. West Caradon, 25s.  
Devela Moyer, 12s. 6d. Old Shepherds, 20s. West Crebor, 7s. 6d.  
Eberhardt, 12s. 6d. Organo, £2 10s. 6d. West Polbreon, 14s.  
East Blue Hills, 7s. 9d. Orita, 10s. 6d. Wheal Coates, 12s.  
East Rose, 21s. 6d. Potosi, 11s. 3d.

BANKERS: LONDON AND WESTMINSTER.

**FERDINAND R. KIRK, STOCKBROKER,**

5, BIRCHIN-LANE, LONDON, E.C.

Fortnightly Accounts opened in all Stock Exchange Securities on receipt of  
the usual cover.

BANKERS: LONDON AND WESTMINSTER, Lothbury.

**MR. E. J. BARTLETT, STOCK AND SHARE DEALER,**

30, GREAT ST. HELENS, LONDON, E.C.

Selected List of Investments post free on application.

**ABBOTT AND CO., STOCK AND SHARE DEALERS,**

9, CORNHILL, LONDON, E.C.

**MR. W. MARLBOROUGH, STOCK AND SHARE DEALER,**

29, BISHOPSGATE STREET, LONDON, E.C. (Established 30 Years).

Can SELL the following SHARES at prices annexed:—

40 Almaden, 15s. 60 Herodfoot, 20s. 6d. 90 Parys Corpora., 5s. 6d.  
25 Bratsberg Cop., £1 19 60 Ind. Consols, 12s. 6d. 5 Van, £4 1/4.  
50 California Gold, 20s. 6d. 60 Kapanga, 15s. 6d. 30 South Devon, 12s. 6d.  
100 Colombian Gold, 30 Leadhills, £2 15s. 6d. 75 Sortridge Con., 4s. 9d.  
50 Corporation of South 60 Langford Silver, 10s. 6d. 60 Tankerville, 5s.  
Australian Copper, 21s. 3d. 25 La Plata, 17s. 6d. 50 Tolima A.  
45 Callao Bis., £1 8s. 9d. 25 Marke Valley, 16s. 6d. 50 Tolima B.  
50 Cliters, 12s. 6d. 25 Nouveau Monde, 7s. 9d. 5 Van, £4 1/4.  
50 Drakeville, 7s. 6d. 60 New W. Caradon, 8s. 6d. 30 West Crebor, 7s. 6d.  
80 Dev. Friendship, 6s. 75 New Caradon, 6s. 6d. 50 West Lisburne, 12s. 6d.  
50 East Rose, 21s. 6d. 25 Organo Gold, £2 12 6d. 30 West Devon, 6s.  
30 East Caradon, 20s. 6d. 50 Old Shepherds, 20s. 6d. 20 Wheal Crebor, £2 3 9  
50 Eberhardt, 12s. 6d. 25 Orita, fully pd., £11 12s. 6d. 30 Western Andes Gold,  
30 Frontino, £2 15s. 3d. 80 Prince of Wales, 7s. 6d. 25.

**COLOMBIAN ANDES.**—Having an extensive business in these shares both as a  
Buyer and Seller, investors would best consult their interests by applying to  
Mr. Marlborough if they desire to do business in them. Profit for Nov., 470s.

**TOLIMA.**—The return for October fully maintains the extraordinary richness  
of this great Silver Mine, the net profit for the month being £5312. Profit for  
November over £5000. These shares must rise at least 100 per cent., and are now  
very scarce.

**WESTERN ANDES.**—Net profit for November, £1100. This mine has already  
returned in dividends about £28,000.

Shares in Home, Foreign, and Colonial mines, bought and sold at net market  
prices, free of commission.

Purchases for forward delivery at special prices on receipt of deposit of 20 per  
cent.

BANKERS: ALLIANCE BANK (Limited).

**THE**

**"DIFFERENTIAL"**

**PUMPING ENGINE.**

(DAVEY'S PATENT),

FOR

DRAINING MINES, WATER SUPPLY OF TOWNS, IRRIGATION,

SUPPLYING DOCKS, PUMPING SEWAGE, and GENERAL

PUMPING PURPOSES.

**HATHORN, DAVEY, AND CO.,**

**LEEDS.**

HATHORN, DAVEY, and Co. have Patterns of "Differential" Engines of all  
sizes, from 5 to 500-horse power, and have facilities for supplying very power-  
ful Engines and Pumps at a short notice.

**MR. CHARLES THOMAS,**

MINING AGENT, STOCK AND SHARE DEALER,

3, GREAT ST. HELENS, LONDON, E.C.

**MR. ALFRED THOMAS,**

MINING AGENT, STOCK AND SHARE DEALER,

10, COLEMAN STREET, LONDON, E.C.

**SURE CASH.** What shall I do with it? A new work for the  
guidance of investors.

Published by ALFRED THOMAS, 10, Coleman-street, London, E.C.

"Invaluable to those who cannot attend the markets."

**HENRY GOULD SHARP,**

21, THREADNEEDLE STREET, LONDON, E.C.

ESTABLISHED 1852.

BANKERS—London and County Bank, Lombard-street, London, E.C.

**Messrs. ENDEAN AND CO., STOCK AND SHARE**

**DEALERS, 55, GRACECHURCH STREET, LONDON, E.C.**

ESTABLISHED 1861.

BANKERS: London and Westminster, Lothbury, E.C.

**JOHN B. REYNOLDS, STOCK AND SHARE DEALER**

37, WALBROOK, LONDON, E.C.

Established Twenty-five Years.

BANKERS: LONDON JOINT-STOCK.

**WEST KITTY.**

In reply to enquiries, this mine is opening up as well as can be desired, and  
the returns of tin are about 20 tons per month, thus allowing a large margin for  
dividends.

**TREVAUNANCE UNITED.**

Mr. REYNOLDS calls attention to the official report of this mine in this  
day's Journal, and is prepared to buy any number of shares at reasonable prices.  
The mine is exceeding expectations. Buyers can be supplied at moderate rates  
through the market or by Mr. Reynolds.

Mr. REYNOLDS, at considerable expense to himself, is prepared to advise as to  
the Purchase or Sale of Mining Shares on the receipt of a fee of 21s. His regular  
correspondents, however, can be advised gratuitously.

Mr. REYNOLDS refers his readers to his letter on p. 128 in this day's Journal.

**GRANVILLE SHARP, STOCK AND SHARE DEALER**

32, QUEEN VICTORIA STREET, LONDON, E.C.

BANKERS: LONDON AND WESTMINSTER, London, E.C.

**MR. ALEXANDER DAVIDSON**

STOCK AND SHARE DEALER.

LEADENHALL HOUSE, 101, LEADENHALL STREET, LONDON, E.C.

**MR. W. TREGELLAS, 40, BISHOPSGATE STREET**

**WITHIN, E.C.**

Deals in all descriptions of STOCKS and SHARES at close market prices.

**JOHN RISLEY, STOCK BROKER AND DEALER IN**

**MINING SHARES AT NET PRICES, 33, CORNHILL,**

**LONDON, E.C.**

**SPECIAL BUSINESS in West Caradon (cum the new shares, viz. West**

**Gonamen), New West Caradon, New Caradon, Sortridge, and Langford.**

WEST GONAMENA shares will be dealt in separately after the 24th inst.

The shares in this mine will probably be worth over £5 per share at no very distant  
date.

Clients sending orders for West Caradon shares should make special stipulations  
for the new shares to be included in the purchase, to save dispute.

**MR. W. B. COBB, 29, BISHOPSG**



## Meetings of Public Companies.

## FRONTINO AND BOLIVIA (SOUTH AMERICAN) GOLD MINING COMPANY.

The annual general meeting of shareholders was held at the Cannon-street Hotel, on Wednesday.

The Hon. F. C. DRUMMOND in the chair.

Mr. J. JAMESON TRURAN (the secretary) read the notice convening the meeting, and the directors' report, embodying the letter of Mr. R. B. White, and the statement of accounts were submitted:—

The directors report that the accounts show a credit balance on the six months working of 43451. 18s. 6d. The expenditure on the mines under the heading "labour, cost and materials," is about 40000. above that for the six months ending December 1881. The works of development are nearly completed, and the directors have reason to expect that considerable improvement in the profits will take place during the current half-year. It has been the endeavour of the board to restrict present expenditure as much as possible consistent with the full utilisation of the Pocuné water, and the opening up of the Cordoba property. The board have had the assurance of Mr. White that the reserves of minerals requisite to give increased returns have already been secured, and that the completion of the stamping power is only requisite to give the yield promised by him. The majority of the board have full confidence in the result of the works designed by Mr. R. B. White. A copy of Mr. White's letter to the directors, on the subject of the working of the mines, is annexed to the report. Since the last meeting of shareholders two dividends of 1s. per share each have been paid in July and December, 1882. A settlement has been effected with two of the vendors entitled to a portion of the 50000. purchase-money contingent on dividends, by the payment to them in July last of 15000. In lieu of 30000, to which they would have been entitled when the contingent claim became payable.

In a long letter on the company's property, Mr. White says:—Although the cost at the mines continues high, yet all the wishes of the shareholders and the orders of the board are being attended to as regards the limitation of our expenditure to the works authorised in connection with the Pocuné water. The agent has pushed on these works to the utmost as there is real economy in doing so, and if he could have procured carpenters and mechanics enough he would have done more. The work will be finished sooner than was anticipated, and you may be sure that barely that which has been sanctioned will be executed. I therefore look forward with confidence to a large reduction in cost, and a material further increase in the returns during the current half-year. At the last meeting of shareholders I stated my belief that certain results would be attained from August forwards, but the completion of some of the new works was delayed longer than I had estimated, and the backwardness of Cordoba and Silencio in the matter of returns, for reasons above given, have placed me, as is too often the case in mining affairs, in error to some extent. But I believe you may congratulate the shareholders upon what has been done, and upon the fact that, due allowance being made for the delays and drawbacks met with in all mining, and especially in mining in an uncivilised country like Colombia, we are steadily nearing the position which the proved value of these mines has led you to look forward to.

The CHAIRMAN said: Gentlemen, I regret that it has fallen to my lot to take the chair on this occasion. I will read you a letter that has been received just now from Mr. Foakes, addressed to the secretary:—"Be so good as to inform the board that I have declined to offer myself for re-election at the general meeting of the Frontino and Bolivia Company's shareholders, to be held to-day. The board may, as from the receipt of this letter, consider me *defunctus officio*. If I attend the meeting to-day it will be as a shareholder only. Yours faithfully (signed), Thomas Eyre Foakes." I have also a telegram from Mr. Monypenny:—"Quite unable to come up to-day." He has been suffering from serious illness, and his doctor will not allow him to attend. I am, therefore, obliged to take the chair, and I must ask the indulgence of the meeting, as I am not in the habit of taking the chair at large meetings, and I have also to add that I do not bear very distinctly, so that I must ask the indulgence of the meeting. (Cheers.) Gentlemen, I will not occupy your time long. I will refer first to the directors' report, to a few matters of detail in the working of the mines. The working during this period of six months has been very fully and very ably described by Mr. White in his letter to the directors, which accompanies the report. I will say, however, that having attentively perused all the papers that have come from the mine, and the correspondence with Mr. Franklyn White, which is forwarded monthly to you, I will say for myself, and I think I may say for Mr. Monypenny, that we have been well satisfied with what he has done, and with the great and steady progress which has been made during the six months under review towards the complete establishment of the several mines, and I think that the shareholders will feel that under the very difficult circumstances in which Mr. Franklyn White has been placed in the last four months—since April, when Mr. Robert White left the mine—that they are most indebted to him for the great and constant care he has given to the interests of the company there. I think that his time has been devoted entirely to the company's works there. I think he has fully carried out the plans which Mr. Robert White had instructed him to do. We have had many disappointments during his period from the weather—too little rain at one time, and too much at another; but, on the whole, I think the shareholders may be congratulated on the state of the mines at that time and during the five months which have elapsed of which we have had reports, from June 30 to the end of November. You will find that the yield of gold for five months, as compared with the previous six months, is 13,400 ozs., as against 14,100 ozs. The value of that gold with the profit on exchange, and the bought gold comes to 37,4000., as against 39,2000., the value of the six months' gold; the expenditure, including that upon capital account, is 31,7000. for the five months, as against 40,7000. for the six months. From these figures shareholders will observe that the expenditure has decreased, and that the proportionate yield of gold has increased. The agent's reports and letters for the month of November, which have been circulated among the shareholders, appear highly satisfactory, and there is one point which, I think, may be noticed, that no less than 760 ozs. of gold have come from one mine, the Salada. That is the largest amount that has ever come from that mine, and it is a mine which, perhaps, may be considered the most valuable of those belonging to the company, and the Silencio. I will presently ask Mr. Robert White to give you some more information on the present state of the mines and the working of them during the period that has elapsed, as well as his views of the best mode of concluding the works which have been so long in progress. I will simply say that, in my opinion, the works have been the most successful that the supply of minerals has been required to be made for the future—that is, secured for the future—the stamping power has been required to stamp that mineral which the Pocuné water has given us the power to work. These are the points that appear to me, roughly, that we have had to contend with. The reserve of minerals is complete, the Pocuné water is there; the stamping power, I think, is the only thing which is not finished. There is one point which I may refer to, and that is, that a settlement has been made with two of the vendors. A payment of 15000. has been made for the contingent claim of 30000. to which they would have been entitled when 10 per cent. dividends were paid.

A SHAREHOLDER: May I ask you what is the outstanding claim of the vendors now?—The CHAIRMAN: 20000. 10000. being due to Mr. Powning's estate, which will go to the company in payment of their claim against him. There is one other claim which is not finally settled. Counsel's opinion has been taken on the question, and it is favourable to the company's interest. With respect to the settlement with the vendors, I think I ought to state that Mr. Foakes rendered valuable assistance to the company in arranging the settlement of that claim. I think it is a favourable settlement to the company. (Hear, hear.) I may say with respect to the Stock Exchange, that since the last meeting the board have applied to the Committee of the Stock Exchange to place the new issue of shares in the list for quotation with the old shares, and have supplied the necessary information for the purpose to the committee, and I have no doubt that it will be granted. On this occasion, gentlemen, as you are aware, the retiring directors by rotation were Mr. Foakes and myself; Mr. Foakes has retired and I offer myself for re-election to the board if the shareholders choose to do so. I beg to say that the names of the gentlemen who offer themselves for election are Mr. Donagan, Mr. C. F. Lowe, and Mr. G. S. Harris. Gentlemen, I beg with these remarks to move that the report now presented be received and adopted, and that the accounts of the company to June 30, 1882, having been examined and audited, be now passed and allowed.

Mr. HANCOCK seconded the motion.

The CHAIRMAN, in reply to a SHAREHOLDER, said that Mr. Baxter had not attended any board meeting since this year. He was not aware where Mr. Baxter was—(a laugh)—and they had no information on the subject. The last time that he attended was late in the month of December.

Mr. SEAL complained of the utter absence of anything like satisfactory information. He had always contended that so long as Mr. Foakes remained on the board it would be injurious to the company. Mr. Seal proceeded to make many more remarks respecting Mr. Foakes, which were of a personal character, and was frequently met with interruption, cries of "Question," &c.

Ultimately it was put to the meeting and decided that Mr. Seal should not be allowed to continue his personal remarks regarding Mr. Foakes.

Mr. SEAL continued: There was a discrepancy in the accounts, as 15000. said to be carried to the reserve fund did not appear there. He thought they should have had some explanation with regard to the issue of the new shares, 1047 of which had not been applied for, and were still in the possession of the company, or should be. There had not been a word said upon the most important points connected with the accounts, and he thought that before adopting them the new directors should have an opportunity of examining them. He moved, as an amendment, "That this meeting stand adjourned to Feb. 28 next, in order that the accounts may be approved by the new board before they are submitted to the shareholders for adoption."—Mr. BUTTERLAND seconded the amendment.

Mr. TRURAN explained that, with regard to the 15000. referred to by Mr. Seal, that was included in 17660. 5s. premium on new shares. It had virtually been taken out of the profit and loss account and transferred to the balance-sheet, where it properly belonged.

The CHAIRMAN said the sum was now standing in reserve which amounted to 67000. That sum did not bear interest. With regard to the depreciation account the matter was fully discussed with the auditor and with the assistance of Mr. Robert White, and it was decided, after a long discussion, that 10 per cent. was too much to deduct. The auditor considered that a sum of 5 per cent. would amply cover the depreciation. There were 1135 shares unissued, and it would be for the board to issue those shares when and as they considered most in the interests of the shareholders, and to get the best premium upon them they could. He thought that the fact of their not being issued was an advantage to the shareholders.

Mr. HANCOCK said that the amendment was drawn out in a very artful way, and spoke about a board of directors who were not yet elected. The gentlemen

who were to be proposed ought to have looked into the company's affairs before they came forward for election.

Mr. DONAGAN said the new board would have on their shoulders the accounts to Dec. 31 last, and he thought that was quite sufficient for them, and that their time might be more profitably employed in making themselves masters of details in connection with the working of the mine. He should like to have time to consult Mr. White in connection with that. He submitted that if the accounts to June 30 were passed to-day they would leave those to Dec. 31 on the shoulders of the new board.

The CHAIRMAN held that the accounts were correct. He denied that there was any mistake in them, or that they were wrong in any way. He did not think it fair that there should be any delay in passing the accounts, and he considered that that would be a great slur on those who had put their names to them. (Hear, hear.)

The amendment was then put to the meeting, and lost by a large majority. Mr. SEAL demanded a poll, but this, in obedience to the general wish of the meeting, he did not persist in.

The original resolution was then put and carried.

Mr. ROBERT WHITE said that in justice to the auditor it was right that he should supplement the Chairman's remarks respecting the examination which they made of the accounts with regard to depreciation by his own explanation. Those accounts which were written off for depreciation as a general rule were merely a matter of account. With that he did not profess to have anything at all to do, but in this case a certain amount of capital had been supplied with a certain object, and certain works had been carried out with that capital. They had new buildings, new mills, water-courses, and so forth, and it was a serious question whether an arbitrary amount could be written off for depreciation when practically they had no depreciation, and not only that but really their properties were worth a great deal more on June 30 than on Jan. 1. That was a question which was thoroughly gone into, and in view of his explanations, thorough explanations he might say, stating mill by mill, building by building, what had been done with the money, the auditor resolved on this occasion that 5 per cent. depreciation would be sufficient. He thought that was the only point he had to give an explanation upon respecting what had been said about the accounts. The Chairman had spoken of the important points which they certainly made in their six months' work—the acquiring of a supply of mineral sufficient now to keep their stamps supplied and provide for the extensions which might still be carried out; the construction of a certain amount of stamping and water-power; and the utilisation of the Pocuné water. The mines at the present time might be said to be carrying out the whole of these works, producing a larger amount of gold than they were. The principal drawbacks, as he had mentioned in his letter to the directors, was the backwardness of the work in both the Cordoba and the Silencio Mines. The total number of stamps which they had estimated would be erected by the expenditure of the new capital was still short by 60 heads of the number, and, therefore, it was very easy to make a calculation that they were short by about 10000. profit a month of the amount which they ought at the present time to be receiving if they had been able to carry out the whole of these works, which he estimated, and of which he spoke at the last meeting on July 17. In the Salada, where they ought to have 43 heads, they had 36. In the Silencio, where they were going to erect 15 heads, to be worked by the Pocuné water, they had not done it, and only had six heads. In the San Joaquin they had not yet put the old of the nine head stamps to work. In the Tigrito, where they were going to substitute 12 stamps to be worked by the Pocuné water, they were short by six heads. They were short in the Rosario by 12 heads, and in the Cordoba they were short of 12, although they had laid out a great deal of money in procuring material for the stamps, and they were practically ready to be put up. There was a very small amount of money to be spent on them now. He thought that later on they had better complete their works, and get more out of the Pocuné water, and he believed his brother was now acting entirely on that plan. He had told him practically not to count on further extensions, and he thought at the present moment he was entirely acting on that. He detailed the difficulties he had had in order to get the company a perfect title to his property, and mentioned that after much negotiation with the Government he had succeeded in doing so—(Cheers)—and the shareholders were now the owners of a freehold property in Colombia with the mining rights.

Mr. STAPLES asked if there was any prospect of the cost for wages being reduced?—Mr. WHITE thought not, as the climate in which their mines were situated was so bad. They could not get a resident population in the district; they had only a migratory population; in fact, the agent referred to it now in his report, and said that in the month of December a great many men were leaving for their homes, that was a drawback, but at the same time they had been much better situated as regarded labour since the company had retained a medical man of their own at the mines. Previously the percentage of sickness had been 10 per cent. but now it was only 5 per cent. The company's property was entirely suspended. With regard to their farms, he thought they would soon begin to reap the benefit of them, and that they would have a very material recompense upon the amount of their outlay.

Mr. BUTTERLAND asked what would be the effect of altering the ton from 27 cwt. to 20 cwt.?—Mr. WHITE replied that when the next accounts were published they would put a note in them explaining the alteration in the tonnage. The effect would be that they would appear to crush a larger number of tons, and they would get a less percentage. Of course it would not affect the profit at all.

Mr. STAPLES said it only affected the percentage of gold per ton.

Mr. WHITE added that it would also show advantageously in regard to the cost.

A SHAREHOLDER asked why mechanical power was not used in driving the adits, tunnelling, &c.?—Mr. WHITE replied that the rock ground through which their adits were being driven in both Palmichala and Silencio—the only important works there, was not ground in which they could use rock-drills as they were soft ground. They came every now and then upon hard centres of crystalline ground, they met them at intervals, and there was nothing to be put up with their laboratory and assay and melting office. They were now instituting a series of assays not only upon the pyrites but upon the sands and pyrites, because in the sand which was discharged from the stamping-mill it might happen that the gold would exist solely in the pyrites which was contained in the sand, and that the particles of quartz might not contain any gold at all; or, on the contrary, it might result that there might be gold in both of them. That was a point which had to be determined very carefully if they were going to treat their material.

Mr. DONAGAN, Mr. Lowe, and Mr. Harris were then elected to seats at the board, the nomination of Mr. Sutherland was rejected by the meeting.

Mr. TILLEY was re-appointed auditor.

It was resolved that the sum of 57100. 2s. 6d., now appearing in the balance-sheet to June 30, 1882, as reserve fund, be applied to the capital account, and that any further sum which may be received as premium on the unissued shares be applied to the same purpose.

Mr. HILL, at the invitation of the directors, said that he had visited the mines, and was delighted to find the admirable manner in which they were worked. He thought the company possessed a most valuable property, and so much so that he impressed with its value that he wrote to his father to buy shares in the company if he were not already a shareholder.

A vote of thanks to the Chairman then terminated the proceedings.

KIMBERLEY NORTH BLOCK DIAMOND MINING COMPANY.

An extraordinary general meeting of shareholders was held on Monday, at St. Michael's Hall, for the purpose of passing a resolution to increase the capital of the company by the sum of 20,000. divided into 2000 shares of 100. each, and also to enable the board to purchase the founders' shares, by giving these shares in exchange for the 900 founders' shares.—Colonel COXON occupied the chair.

Mr. THOMAS J. SEEL (the secretary) having read the notice convening the meeting,

The CHAIRMAN said we sent you a circular, gentlemen, a few days ago for the purpose of explaining the nature and purpose of these resolutions, and of removing some misapprehension which appeared to have existed. But I think it may nevertheless be advisable to say a few words in further explanation. My attention has been called to the first paragraph, and I am desired to point out that it is an increase of capital, though not in the ordinary sense of the term. The special privileges attaching to the founders' shares of this company are set forth in Article 125 of the Articles of Association, and they are also alluded to in the second page of the prospectus, and again in Article 5, page 3, of the Articles of Association; but, gentlemen, nowhere in either of these places I have alluded to do we find any indication of the extreme danger there is lurking in them to the general interest of company, and it is this. So long as they exist we are, so to speak, gagged, bound hand and foot, utterly unable to entertain any proposals involving an extension of capital, and our hands are tied no matter what good fortune may be within our reach. And further we have ascertained beyond any manner of doubt whatever, and upon the best authority, that the committee of the Stock Exchange will have nothing to say to us as long as they exist on any subject whatever, that is, of course, involving an increase of our capital.

A SHAREHOLDER: Why is it so, Sir, are the terms so unjust to the shareholders that the Stock Exchange will have nothing to say to you?—The CHAIRMAN: We cannot speak of the injustice of the Stock Exchange. Moreover the committee of the Stock Exchange will not entertain the proposal from us involving as the basis of any scheme we may have of amalgamation, or otherwise the conditional absorption of these shares—the shares must be for once and all wiped out unconditionally. Now so forcibly have these considerations recommended themselves to a very large majority of the holders of these shares that out of the total of 900 we received a guarantee to give up shares to the amount of 826 without any pressure. We merely asked the question. I may say of those 826, 410 were held by the board, and although we had considerable difficulty in inducing some of the smaller holders of these shares to take the same broad view of the situation, I am happy to say that now all have consented and it only remains for you to give us the power that we seek in these resolutions to enable us to increase our capital by 20,000. for the purpose of purchasing out the founders' shares with the ordinary shares, and of altering the Articles of Association to enable us to do so. (Cheers.) One word more, gentlemen, with regard to the ordinary shareholders, whatever doubts may have existed in the minds of the founders' shares as to the advantages that will accrue to them by the carrying out of this proposal, I submit there can be none whatever on the part of the ordinary shareholders inasmuch as by the abolition of the founders' shares, the ordinary shareholders without any actual increase of capital will take the whole of the surplus net profits instead of only half as heretofore. That speaks for itself. I feel, therefore, that you will unanimously support the resolution which I now move.—That the capital of

the company be, and the same is hereby, increased by the additional sum of 20,000. divided into 2000 shares of 100. each.

The resolution having been seconded, in reply to a SHAREHOLDER, the CHAIRMAN said that the founders' shares had always stood in the market at about twice the price of the ordinary shares.

Mr. ATKINSON said the founders' shares had been at 250., but the ordinary shares had never realised so much as 120. 10s. After the company had been in existence for some time the ordinary shares stood at 100. and the founders' at 200. It would be found that the founders' shares had always been at least twice the price of the ordinary shares. As regarded their object in doing this they had only one object, and that was the good of the company. They had no interest in the founders, but wanted to put the company on a firm basis, so that whether the dividend was small or large it might be permanent as no doubt would be the case when they turned their small block into a large one, but before they could do that they must do away with the founders' shares. He had been a director of this company since it started and was not one of the founders, and the way in which the net profits were to be divided was very peculiar. If they earned 16,0000. net profit the founders' got 24. 2s., and the ordinary shareholders got 11. 13s., if they earned 20,0000. net profit the founders got 40. per share, and the ordinary shareholders got 11. 6s., and if they earned 24,0000. which was not improbable, though he should like to see it, the founders got 51. 18s., and the ordinary shareholders 14. 9s. The object in bringing about this change was for the advantage of the company and not of the founders. It could easily be understood that the majority of founders' shares were not held to-day by the same people as originally held them. They were now held by some 43 holders, and none knew the trouble the directors had had in getting those 43 to agree. The Chairman had said that the majority of them came forward at once, but there were a few who held out for their right, but he was glad to say that they had now joined in the movement for the advantage of the company. They called a meeting of the founders to consult them, and out of the founders they formed a committee, and this scheme was brought forward by a gentleman who represented the second largest holder of ordinary shares. That gentleman represented 546 ordinary shares, so that he had a very great interest in the company. Colonel COXON (their Chairman) represented the ordinary shareholders at those meetings. Colonel COXON was not one of the original founders, and had studied their interest to the best of his ability. He might mention that the directors held nearly a quarter of the entire capital of the company, so that they were working in the interests of the company, and in their own. He had very great pleasure in seconding the proposition, and he felt that if they studied their own interests they would carry it through. (Cheers.)

Mr. SEEL supported the motion, which was then put to the meeting and carried unanimously. It was also resolved "That Article 85 of the Articles of Association of the company be, and the same is hereby altered, by the addition thereto, at the end thereof, of the following words:—'The board may nevertheless purchase on behalf of the company the 900 founders' shares created by the Memorandum of Association of the company, and pay for such shares by the allotment of ordinary shares, and such ordinary shares may be issued and allotted for such purpose as fully paid up.'"

A vote of thanks to the Chairman and directors then terminated the proceedings.

PORT PHILLIP AND COLONIAL GOLD MINING COMPANY.

The ordinary general meeting of shareholders was held at the City Terminus Hotel, Cannon-street, on Thursday.

Mr. A. T. THOMSON in the chair.

The SECRETARY read the notice convening the meeting and the minutes of the preceding meeting. The reports and accounts were taken as read.

The CHAIRMAN, having expressed his regret at the absence of Mr. Spencer Herapath, owing to indisposition, said that this was the third year when they had to present an unfavourable report. This year the report appeared more unfavourable than it would be on account of the large expenditure incurred in driving the No. 13 level. This expenditure, it might be remembered, was alluded to in the last report, when it was stated that the mine had fallen off in productive quartz in all parts. The directors considered it advisable to drive the No. 13 level with the view of exploring the mine at its lowest depth, and they gave an estimate of the time and cost of driving this level; but, unfortunately, that estimate had been largely exceeded. This could not have been foreseen. They had passed through some very hard limestone, and this had retarded the operation. They had now driven the No. 13 level 728 ft. 6 in. from the shaft. It might be remembered that the extreme distance at which the western lode would be reached was estimated at 1000 ft. If the western lode had maintained its ordinary dip the distance at which it would be met from the shaft was 800 ft.; but between the 10 and 11 ft. levels the lode dipped more to the westward, and, therefore, it was estimated that 1000 ft. would be the distance. Of course, the lode might revert to its original dip, and in that case they would reach the lode at a less distance than had been calculated. Last month they drove 61 ft., because they had got into better ground. It was known, judging from the levels above, that when they got beyond Robinson's lode the country became much softer and better for driving. They had not yet met with Robinson's lode, and as they had passed the point at which it should have been met with it was concluded that the lode had run out. They attributed very little importance to that, because below the No. 5 level Robinson's lode had never paid. Of course it must not be expected that directly the western lode was reached they would get good quartz. It would be necessary to drive on the course of the lode, and sink a winze from the No. 11 level (the No. 12 level had never been driven), so that some little time would elapse before the quartz could be tested; but it was confidently anticipated that they would get a quantity of good quartz. The deterioration of the quartz in all parts of the mine had continued, and had increased in the past year. The expenditure incurred in driving the No. 13 level had been very heavy. It had amounted to 17224. 8s. 4d., besides the cost of the rock-borer, which amounted to 7050., so that the total expenditure on this work had been 24274. 8s. 4d. The loss for the year amounted to 8551. 5s. 2d., so that but for the driving of the No. 13 level they would have had a profit of 15222. 3s. 6d. Another reason for hopes of the western lode was that their neighbours to the north, the New North Clunes Company, at a depth of 1100 ft. had struck quartz which yielded 9 to 12 dwts. per ton, and if this company got quartz like that the prospects of the mine would be very much altered and improved. The debt to the bank had amounted to 5791. 18s. 4d., of which about 4000. was due from this company, and the balance from the Clunes Company. This had been paid off. Mr. Bland having drawn upon the company a bill for 4000., which had to be deducted from the balance on hand. Something had been said for two years past about limiting the liability of the company. The directors stated that they were taking the necessary steps to meet the views of the shareholders. They had obtained the consent in writing of all who were connected with them, which was the first step to be taken. They had taken no further steps, as they thought it better before expending any more money upon such a subject as that, but to wait until they saw what their prospects were in the western lode. Everything depended upon the discoveries which might be made on the lode. Of course, the lode might not be profitable at that depth, and in that case the sooner they stopped working the better it would be for the company. However, when the directors had any news of importance to communicate to the shareholders. The Chairman then moved the adoption of the report and accounts.

Mr. J. R. MACDONNELL (the deputy-chairman) seconded the motion.

Mr. SCHOFIELD asked whether the Criterion Mine had been driven under?—The CHAIRMAN replied that at some levels they had driven to the boundary. The results of the working were given in the report in the following paragraph: During the year 10,241 tons of quartz have been raised and crushed from this part of the mine, producing with pyrites and other gold, 2743 ozs. 3 dwts. 15 grs., compared with 14,705 tons of quartz, and 3176 ozs. 4 dwts. 4 grs. in 1881. The general average per ton was 5 dwts. 8 grs., or 1 dwl. per ton higher. The total net receipts were 7074. 14s. 10d., which is 891. 7s. 10d. less than for the previous year. Since the Criterion ground came into the possession of the two companies in 1879 it has supplied 40,364 tons of quartz, which yielded 9200 ozs. 7 dwts. 12 grs. of gold, being an average of 4 dwts. 13 grs. per ton, of the total value of 37,5874. 11s. 7d. The net receipts by the companies were 23,286. 19s. 2d. The CHAIRMAN, in reply to a question with regard to the late secretary, said that so far as they had investigated there was no reason to suppose that there was anything of importance wrong with regard to the share register. There was no reason to suppose that there was any falsification of the register. In reply to other questions, the Chairman said they had had paying quartz above the No. 13 level, and it was hoped that it would continue downwards. The lodes had varied enormously, yielding in some cases 1 dwl. to the ton on one side, and 16 dwts. on the other.

Mr. SCHOFIELD thought it more than probable that they would have a better state of things in the future, and he thought the directors had done very well not to have made a larger loss in the year. (Hear, hear.)

The CHAIRMAN, in reply to a question, said there was no probability of a call, as the company had over 70000. in hand, taking Consols at the present price. Mr. Bland would probably retire shortly, and his successor had been selected. There would then be a reduction of 2000. in the salary of the manager. Mr. Bland had been with them since 1852.

The report and accounts were then unanimously adopted.

The retiring directors—Messrs. A. T. Thomson and A. Cobbett—were re-elected, and the auditors, Messrs. H. Ramsford and G. Molinoux, were re-elected.

Votes of thanks were passed to Mr. Bland, the manager, and to the Chairman and directors, and the meeting then closed.

## VICTORIA MINING COMPANY.

The ordinary general meeting of shareholders was held at the City Terminus Hotel, Cannon-street, on Thursday.

Mr. A. T. THOMSON in the chair.

The SECRETARY having read the notice convening the meeting, read the minutes of the preceding meeting. The report and accounts were taken as read.

The CHAIRMAN said there was very little to be added to the report. The London and Melbourne Company was now closed, and this company had received its proportion of the 3000. which they expected to receive for the freehold land. The mail which came in on Monday brought a rather better report from Mr. Bland, from which it might be inferred that they were getting into a better description of quartz. It stated that the increase in the tributors' return was due to the excellent yield of a quartz raised by two parties, one of which from 36 tons of quartz obtained a yield of 113 ozs. 7 dwts. of gold, giving an average of 11 ozs. 23 grs.; and the other from 31 tons of quartz obtained a yield of 44 ozs. 12 dwts., giving an average of 1 oz. 8 dwts. 13 grs. per ton. That looked very hopeful, so far as it went. It, at all events, showed that there was some very good quartz in the mine, and it might be hoped that they had got out of the bad band of quartz which they had been in for two years. The result of the month's working was 580 ozs. 11 dwts. of gold, obtained from 1323 tons of quartz, giving an average of 8 dwts. 3 grs. per ton treated. The Chairman moved the adoption of the report and accounts.—Mr. MACDONNELL seconded the motion.



The CHAIRMAN, in reply to Mr. SCHOFIELD, said they had £244. 5s. 5d. at the credit of the capital account, and 777. at the credit of the reserve account. The motion was then adopted.

The retiring director, Mr. Macdonell, was re-elected, as were also the auditors, Messrs. Donagan and Brooks. The meeting closed with the usual compliment.

#### WHEAL GEORGE LEAD MINING COMPANY.

An extraordinary general meeting of this company was held at the offices, Bishopgate-street Within, on Friday, Jan. 26 (Mr. THOMAS MIDDLETON in the chair), for the purpose of submitting the following resolutions:—

"That with a view of raising further capital for the purpose of meeting the company's liabilities and developing their property, the directors be authorised to issue 1000 shares, part of the existing capital of the company not yet issued, such shares to have a preferential dividend of 12 per cent. per annum over all the other shares of the company."

"That Mr. Thomas Middleton be and he is hereby declared to have been duly elected a director of the company, and that all acts properly done by him as such director be, and the same are hereby confirmed."

Prior to the Chairman addressing the meeting, Mr. ROWE, a shareholder, said that he had to make a complaint in reference to the notices calling the meeting. He, though not on the register of shareholders, holding only share warrants to bearer, appeared on a separate list, and consequently he considered that he should have received notice of the meeting, and it was only within the last four days, and then only on calling the attention of the secretary to the circumstance, that he received nothing whatever about it until he saw a report of the proceedings in the *Mining Journal*, from which he noticed that the concession of Mr. Beckingsale was only agreed to on the casting vote of the Chairman, and as he (Mr. Rowe) would be seen that it would have altered the arrangement.

The CHAIRMAN, on behalf of the directors, begged to assure Mr. Rowe that it was through no premeditation on their part that Mr. Rowe had not received the notice. All he could say was that he was most anxious that as many shareholders as possible should be present, and instructions were given that all should be communicated with.

Mr. SMITH (the secretary) stated that all the shareholders on the register, and those whose names he had in a separate book holding shares to bearer, were forwarded notice of the meeting, and with regard to the meeting of Jan. 5, he referred to the letter-book, and read an extract of a letter from himself to Mr. Rowe, wherein it was stated that a special meeting was to be held on the 5th of that month.

The CHAIRMAN said he would like to know from Mr. Rowe if that gentleman received the letter referred to. Mr. Rowe could not say whether he had or not, as all the correspondence between himself and the secretary were in the hands of his solicitors, whom the directors had declined to admit to the meeting.

The CHAIRMAN thought a great deal of the time of the meeting had been wasted on a matter of little importance, and he trusted that Mr. Rowe would not oppose the passing of the resolutions, as they were entirely in the interest of the general body of shareholders, and he appealed to that gentleman whether he would not be satisfied, instead of sacrificing his property, to approve of the course proposed, and thus, as he (the Chairman) believed, place the company on an honest and satisfactory basis. If Mr. Rowe had been present at the meeting held on Jan. 5, and had heard the statement then made, he thought that it would have had some influence on him. He (the Chairman) held 500 shares in the company, which cost him 7000, but when he went into the company he did not indulge in building castles in the air, as he believed that he was going to make a competence by his investment, but he looked at the risk, and could afford to lose the money; but there were a great number of poor shareholders who could not afford to lose, the bulk of whom lived far away—some in the North of Scotland, some in the North and South of Ireland, in Wales, and in the extreme West of England. Many of these had been induced to subscribe for shares which had led to misery of all kinds—the breaking up of homes, and discord in families. On behalf of unfortunate shareholders he was acting as he believed the only way to benefit them—to develop the resources of the property, and see if they could not get some of their money back; otherwise, so far as he was personally concerned, he would like to wash his hands of the company, and take no further responsibility in the matter. He had received a great many proxies from shareholders unable to attend, some of them sending 300 to 400 miles away, but they and others had sent in their proxies which represented 3000 shares. He put it, therefore, to Mr. Rowe if he did not think it would be acting in his own interests to allow the business of the meeting to proceed. He would be happy to answer any questions relative to the affairs of the company. They had no desire to exclude any shareholders.

Mr. ROWE wished to know if the money paid for the 500 shares held by the Chairman went into the vendor's pocket?

The CHAIRMAN said that 100 were purchased through an advertising circular at 12s. 6d. per share, and for the others the money was paid into the company, but only enabled the vendors to take 5000.

Mr. ROWE stated that his shares cost him 22.15s. each, and that he was disposed to spend 5000, in investigating the matter.

After some further remarks from Mr. ROWE bearing on the question of full publicity of all matters connected with the company which the CHAIRMAN stated that he, personally, had no objection, as he could assure the shareholders that it was only with the greatest difficulty that he obtained the concession, and that there was no collusion between the vendor and the directors.

The CHAIRMAN proposed the first resolution relative to the issue of preference shares, and in doing so said that the directors considered it absolutely necessary that it should be passed in the true interest of the shareholders, for if not these shares, which were now of only a nominal value, would be without any value at all. The amount asked for was not a large one, and it had been already explained how it was proposed to expend it. The report of Capt. Kneeshaw proved the value of the lode, and it was believed that a little further expenditure would enable them to realise the full value of the mine. He held the proxies of the holders of 3000 shares, or nearly three-fourths of the capital, who approved of the issue of the preference shares, and, with the exception of Mr. Rowe, they had only one dissentient, the holder of 10 shares, living in the north of Scotland.

Mr. GORDON (a director) seconded the resolution, which was agreed to with one dissentient.

The second resolution, in reference to the election of Mr. Middleton as a director, was then unanimously agreed to.

Mr. LICE (solicitor to the company) said that the meeting, having passed the resolution increasing the capital, it would have to be confirmed, and every shareholder would have to consider the matter for himself. By the Memorandum of Association the capital of the association was fixed at 15,0000, in 15,000 shares of 100 each, and it had been held by the court that, unless it was practically the wish of the whole of the shareholders no preference capital could be raised. Those who objected would have to signify in writing, when the notice of the confirming meeting was sent out, that they agreed to the proposed issue. If that was not obtained the directors had still another course open to them, that of borrowing the money on mortgage; but he would certainly recommend them to adopt the proposed issue of preference shares as the most desirable. It was not the custom at companies meetings in London for shareholders to be allowed to attend accompanied by their solicitors, and it was acting under his advice that the directors had declined to admit Mr. Rowe's solicitor to the meeting; but he (Mr. LICE) would be happy to give Mr. Rowe's solicitor every information desired.

A vote of thanks to the Chairman closed the meeting.

#### ASHSETON UNITED MINING COMPANY.

The ordinary general meeting of shareholders was held at the offices, Queen-street-place, on Wednesday.

Mr. H. D. BROWNE in the chair.

The SECRETARY read the notice convening the meeting.

The CHAIRMAN said—Gentlemen, it will be in the recollection of the proprietors that we reorganised the Ashseton and West Ashseton Companies, and made them into the Ashseton United Company, in the hopes that the shareholders would find fresh capital to carry on the mine. We did not think it was worth while, unless we could get such a substantial sum as would really allow us to develop it. We, Mr. Gundry and myself, found the money to carry the thing on during the liquidation, and we also, when the time came, offered to take out of the new capital which we propose to raise, some 12,0000, two-fifths. I regret to say that the response to our appeal was so very small that it was useless proceeding with the company, and the consequence is that we have called you together for the purpose of winding it up. I will ask the secretary to read the statement of accounts up to the present time.

The SECRETARY read the statement of accounts, which showed a balance of 10,0000 over assets (exclusive of the property, plant, and machinery) of rather over 20000.

The CHAIRMAN: Gentlemen, You have heard the statement read. All the money that has kept the thing going has been found by the directors in the hopes that the shareholders would assist. It only remains for me to move "that the accounts as presented be received and adopted."

Mr. W. GUNDY seconded the motion.

Mr. ROBERTS said he thought it would only have been fair to the shareholders to have submitted the accounts before the meeting, so that they might have had an opportunity of examining them. As matters stood they were not in a position to say whether they would accept them or not.

Mr. CAMERON SWAN also thought it would have been better if the accounts had been sent to the shareholders. It seemed to him that the company was very much indebted to the spirit and enterprise of the directors, who had found the money to carry on the mine. He could not, however, gather from the reading of the accounts how much they owed and what assets they had to meet their liabilities. Could not some estimate be given of the value of the property?

Mr. JOHN TAYLOR remarked that he had the greatest confidence in Ashseton in depth, and he strongly urged the amalgamation of the two companies, believing that West Ashseton could not be developed to advantage by itself.

The CHAIRMAN, in reply to a question, said it had not occurred to him that anything would object to the statement of accounts. They had merely been keeping out the water and doing a little tributing and stoping to as far as possible without funds. They could not go on with the development of the mine without funds. He would be happy to assist any of the shareholders who chose to buy the mine and work it with a small capital.

Mr. GUNDY added that he would be happy to put another 10000 into it if the mine were bought up and worked.

The CHAIRMAN, after some further conversation, promised that the accounts should be circulated, together with a statement showing the work done, and the approximate cost of working the mine on a limited scale. If the response of the shareholders is sufficient the resolution passed at the extraordinary meeting will fall through. The accounts were then adopted.

At the extraordinary meeting which followed, the following resolution was passed (subject to confirmation):—"That the company shall be wound up voluntarily, and that Paul Turquand, of Draper's Gardens, shall be the liquidator in such winding up."

The meeting closed with a vote of thanks to the Chairman and directors.

#### SOUTH DARREN MINING COMPANY.

The ordinary general meeting of shareholders was held at the offices, Austin Friars, on Monday.—Mr. THOMAS BUSH in the chair.

The LONDON MANAGER read the notice convening the meeting; the reports of the directors and of Capt. James, and the statement of accounts were taken as read.

The CHAIRMAN said—Gentlemen, I do not know that I have much to add to the information contained in the reports, which have been circulated amongst you. I may say I have had a long talk with Capt. James this morning, and he gives me a very good account of the property. The mine is still improving, and from what he tells me he has sufficient ground open without further exploration to carry us through another two years. We have here a specimen of ore raised from the 120, which was brought up this morning. It is a very rich piece of ore, and it is raised from the new portion of the mine, which has been opened recently—that is, the eastern portion of the mine. We are getting into maiden ground, and I have no doubt that our mine will greatly increase in value. The sole reason why we are not declaring a dividend is the low price of lead; but I hope the time is not far distant when we shall see an improvement in that respect. I will not detain you longer, as Capt. James will be able to give you more information respecting the mine, and point out the different levels better than I could. I move now that "the directors report and accounts and the agent's report be received and adopted."

Mr. JOHN SCHOFIELD: Gentlemen, I beg leave to second that motion, and in doing so I have a few remarks to make on our position, which I consider is much superior to what it was at this time last year. We have, as you are aware, raised a larger quantity of ore, and we have got more money for it, although of course the price is much about the same, the increased receipts being entirely owing to the increased quantity of ore raised. We have made a profit of about 51000. Instead of a loss, as last year, of about 3000, so that our position is much better than it appears to be by the accounts. The price of ore still continues very low, and I am sorry to say at present there is no symptom of improvement. The returns of foreign mines, which are allowed to bring their ore or their produce to this country free of duty, are keeping down the price of English lead, and threaten to annihilate English lead mining altogether. Mr. Beaumont's mines in Weardale have been closed, and in Teesdale the London Lead Company are losing something like 10,0000 per annum at the present time. Roman Gravel, one of the richest mines in the country, with a return of 250 tons of ore monthly, is only making a small profit, and another very rich mine, Miners, but for the blende it is raising would not pay its costs. Van has reduced its returns to 200 tons a month mainly because of the price of lead. If the price improved of course these mines could make larger returns. There are three Spanish mines under the control of Messrs. John Taylor and Sons—Linares, Alamillos, and Fortuna—which are returning 1400 tons of lead ore per month, and there is another mine in Germany, Mechernich, which is returning 10000 cwt. of pig-lead—not ore, but pig-lead—per week, equal to 15,000 tons per annum. This all comes to the English market without paying duty, while wages are lower and taxation is lighter in the countries which send this lead here. Something must be done to protect the English mining industry or it must become extinct, for at the present time lead mining cannot pay in this country unless you get something exceptionally rich. Our foreign competitors have this further advantage that the ore is found in greater bulk, and they have not to do more than a third of the work we have to do to get it out, so that our costs are proportionately much greater. However, I hope we shall do better in the current year. Since these accounts were closed we have sold two parcels of ore, each of 45 tons, realising 12850. The cost-sheet amounted to 10500, so that we have 19000 to our credit at the moment in addition to the 11180. 11s. 10d. at the end of the past financial year, making a total of about 13000 to our credit. If we maintain that balance, and make a similar profit in the current year there is no doubt that we shall be able to pay a dividend, though it may not be very large. It takes 45000 to pay a 1s. dividend, so that I hope we shall be in a position to pay a 2s. dividend this year, particularly as Capt. James informs us that the mine is looking well, and he has no doubt in his own mind that we have quite a thousand tons of ore in reserve, which is equal to two years' raising in the country where few mines in that position, although at the present time it would not be judicious to increase our returns. If we got an increase of 2s. or 3s. per ton for our ore we should increase our sales, but at present I do not think it would be desirable to do that, more particularly as Sir Pryse Pryse still declines to reduce the dues, notwithstanding the depressed state of the metal market. I do not know that I have anything more to say, but the Chairman or Capt. James will, I am sure, be happy to give any further information.

Mr. MURCHISON, in reply to a remark, stated that this company used to get about 22s. per ton of ore, whereas now the price obtained was only about 14s. 5s. Mr. SCHOFIELD added that but for the large percentage of silver in their ore this mine could only be worked at a heavy loss with the present price for lead.

Mr. SHEARWOOD: Is everything included in the cost you have mentioned?

Mr. SCHOFIELD: Everything except the office expenses, which the copper will quite cover.

Mr. SHEARWOOD: I suppose under present circumstances we must consider that excessively good.

Mr. SCHOFIELD: I expect that we shall make a profit of from 8000 to 9000 a month for the rest of the year.

Mr. DAVIDSON: What does the balance of assets represent?—Mr. SCHOFIELD: Smelters for ore sold 1911. 13s. 5d., and cash at bankers 10571. 1s. 5d. We have about made up in the past year what we lost in 1880 and 1881. In reply to a further question, he said the average monthly cost was about 5500.

Mr. DAVIDSON: Could you not pay a 1s. dividend, and still have sufficient working capital?—Mr. SCHOFIELD: If you took 4500 away from our balance, and you happen to meet with some misfortune, we should have nothing to go on with. We must have working capital. We should be as glad to receive a dividend as any shareholder could be, but the largest holders in the company. The Chairman holds 575 shares—he is the largest holder—and the other members of the board hold a large number of shares. We have here a letter from a holder of 450 shares, congratulating us on the position of our affairs. We have the most perfect little mine that I have ever seen in my life, and with a better price for lead it would be one of the best mines in Wales. It is certainly improving in depth.

The CHAIRMAN: The machinery is in first-rate order in every respect. Capt. James: As we get eastward the lode improves, and there is less copper in it. It would be better if the shareholders would allow us to do so to leave the ore in the mine at present. From the plan you will see we have two distinct pieces of ground both dipping east, and getting richer as we go eastward.

Mr. SCHOFIELD: How far are our ends from the boundary?—Capt. JAMES: Our 130 fm. level is now touching in upon the ore, and we have 304 fms. to drive to get to the boundary, and in the 120 east we have 281 fms. more on the lode. The lode is richer there than it has ever been before—richer lead and silver and freer from copper. We have passed through a good deal of ground since we got to the lode, and we have not as yet reached the boundary, but we would not pay to raise it. In the 110 east we have 271 fms. to get to the boundary, and we are coming straight against the East Darren lode. East Darren has been a very rich mine; and as we get eastward we get into a high hill which will give us an increase of 53 fms. We may look for 23 fms. of good ground in the 130, and Murchison's shaft by-and-by will go down into the main part of the ore ground.

Mr. SCHOFIELD: I think we ought to sink Murchison's shaft. What would be the cost of sinking?—Capt. JAMES: We should not want anything extra for the present. The extra cost from the starting of the work would be 300, or 400, per month.

A SHAREHOLDER: How long would it take?—Capt. JAMES: About 12 months. The question of sinking Murchison's shaft was, after a short conversation, left to the discretion of the directors.—The report and accounts were then unanimously adopted.

Mr. SHEARWOOD proposed the re-election of the retiring director, Mr. John Schofield.—Mr. HAYNES seconded the proposition, which was carried.

Mr. DAVIDSON proposed the re-election of Mr. Louis M. Berghel, the auditor. This proposition was seconded by Mr. SHEARWOOD and adopted.

On the motion of Mr. SHEARWOOD, seconded by Mr. SLADE, a vote of thanks was passed to the Chairman and directors, and the meeting then terminated.

#### WEST CALLAO GOLD MINING COMPANY.

The statutory meeting of shareholders was held at the Cannon-street Hotel yesterday.

Sir WILLIAM SMITH (the Chairman) presiding.

Mr. F. J. WARNER (the secretary) read the notice convening the meeting.

The CHAIRMAN: I need not tell you, as you all understand, that this is a purely formal meeting, and that we are obliged by Act of Parliament to call a meeting of the shareholders within four months of registration, and what the Legislature in its wisdom meant I do not know. It left us with nothing to do on this occasion. You will probably like a few remarks as to the present state of the company. We did not complete our development until six weeks ago, so that we have only had six weeks to do everything that we have done. In that time we have engaged our manager and consulting engineer, and under their inspection and supervision we have bought all that is necessary for starting the mines. We have gone on a small scale at first. In the present transitional state of gold reduction appliances we thought it better to do as little as we could, and to test as we go, and try the nature of the ore. We can at any time supplement what we are sending out at the very shortest notice. Everything has been got in the most economical manner. I think I can appeal to the shareholder at that end of the room, who accused us of cutting him down tremendously; but I am happy to say he has such faith in the mine that he has applied for 125 shares. The things will be packed up by Monday, and we send them out by Bordeaux in order to save the exorbitant duty of 30 per cent. which is charged upon goods which go via Trinidad. The manager and consulting engineer and the vendor of the property go out on the 17th of this month, and will probably be there in time to receive the things at the mine. We have made what I believe to be a very advantageous arrangement with the New Callao Company. Their directors calculate that they have about a thousand tons of gold quartz at grass, which they hope will realise 20s. per ton. We have agreed to put up a 10 ton battery and to work that upon half shares. That is, we take half the gold for the working, and we retain the tailings. In doing that we shall put their mine, but as they are only, as it were, across this table to our own, they having sunk their shafts on our boundary, we shall

prove at the same time our own ore, and as soon as we get the ore out of our shafts by our agreement we can turn to and reduce that. They give us the use of their houses and roads which they have made. You will see they have been a year or two before us in the field—they give us the use of the saw-mill. We help them with the use of the pump until we require it. It has been very equitable. We bought over 1000 shares, but it has been equitably adjusted on both sides. We have the pleasure of having one of their directors on our board, and he helps to keep the two things together. Their consulting engineer is our consulting engineer, and we are working very amicably together. It will enable us to prove the ore very much earlier than we could possibly otherwise have done. The shares were rather slowly taken up at first; but we are allotting daily, and we have allotted between 500 and 600 to-day. We have over 23,000 shares allotted, and we expect a great many more applications now. In fact, it is anticipated by those who are working the thing that the whole of the share capital will be taken up. I do not know that I have any more remarks to make; but I shall be happy to answer any questions. I may just mention that it is pointed out in the prospectus, but it is well I should allude to it, the accessibility of our field as compared with the old Callao and that group of mines. We do not pay anything like half the expense of transit from the port. We unload at Bolivar, and take it 90 miles across the savannah, and it gives good roads all the year round; whereas they have to unship and ship again, and then unship, and carry from their port of entry across the country, and that is nearly double the distance and about double the expense. That is, I think, a very strong point in our undertaking. Mr. Skerchly, our engineer, who surveyed the mine, and upon whose report we have principally undertaken it, is present, and I am sure will be very happy to answer any questions which you may put to him, and he will be much more able to answer them than what I should.

No one rose to ask any questions, and

The CHAIRMAN requested the secretary to read the notice calling the extraordinary meeting.

The SECRETARY read the notice convening the meeting, which was to consider and, if thought fit, pass the following special resolutions:—That the Articles of Association be altered by adding thereto the following Articles:—Share Warrants: 31A. The company, with respect to fully paid-up shares or stock may issue warrants (hereinafter called share warrants), stating that the bearer is entitled to the shares or stock therein specified, and may provide, by coupons or otherwise, for the payment of future dividends on the shares or stock included in such warrants.—31B. The directors may determine, and from time to time vary, the conditions upon which share warrants shall be issued, and in particular may make a warrant upon which the bearer of the place of one worn out, defaced, lost, or destroyed; upon which the bearer of a share warrant shall be entitled to attend and vote at general meetings; and upon which a share warrant may be surrendered, and the name of the holder entered in the register in respect of the shares or stock therein specified. Subject to such conditions and to these presents the bearer of a share warrant shall be a member to the full extent. The holder of a share warrant shall be subject to the conditions for the time being in force whether made before or after the issue of such warrant.

The CHAIRMAN: In the circular accompanying this notice we inform you that the object of this was on behalf of the would-be French shareholders. I believe there is every prospect of a good many shares being taken up in France, and they object to go through the form of registration, and require a hand-to-hand delivery of shares. It was simply to accommodate them that we propose this alteration. I beg to move that the Articles 31A and 31B, as just read, be added to the Articles of Association.

The CHAIRMAN, in reply to several questions, said that could not take effect until the shares were paid up in full. Of course the board could accept payment in full. A dividend would be paid on the amount that is paid up and not on the amount called up. At present they had allowed shareholders to pay up in advance when they have so wished it, paying them 5 per cent.

A SHAREHOLDER asked what was the advantage of paying up their shares in full if they got nothing in exchange for it?—The CHAIRMAN replied that in about four months time the whole capital will be paid up or called up: 24,000 shares had been paid up, and they had allotted 500 or 600 that day.

A SHAREHOLDER: And you deem that sufficient to go on upon.—The CHAIRMAN replied in a firm and affirmative. They had made a very advantageous arrangement with the vendor, by which he had taken the first 50000, payable to him in shares instead of cash. Therefore, it virtually placed them with 20,0000, which they agreed to have first, plus 50000. That would give them ample capital to start with. He hoped very likely not to require any more, but they would see. Of course if it proved a great success they could lay out a good deal of money in extra stamps. The vendor's shares were not transferable for 12 months. The board could not hinder him from doing what he liked with them, but they would not pass through the company's books until next January.

Mr. T. KIRKWOOD seconded the motion, which was agreed to unanimously.

The CHAIRMAN, in reply to further questions, said that the whole of the machinery that was ordered had been paid for, and that they had still a balance in hand.

Mr. SKERCHLY, in reply to a SHAREHOLDER, said that, with regard to the labour question, he had never had any difficulty in getting men. New Callao and West Callao were in a much better position than any other mines. They were close to Bolivar, to which place a man could walk in two days, and they could be easily provided with provisions there, and they would work for them now, with the disadvantages of being a new company, for something like 20 per cent. less than at Callao and Potosi (?). He had not the slightest doubt but what he should get his full complement of men from Trinidad. The best men for underground work were Creoles, and for surface work Venezuelans.

The CHAIRMAN said he had not the pleasure of knowing Mr. Skerchly until a few months ago, but the more he saw of him the more he liked him, and the more he believed in him; and he thought his colleagues agreed with him.

Mr. SKERCHLY said he was much obliged to the Chairman for his kind remarks. He might say that the gentleman who was accompanying him was one on whom he could place implicit reliance. He was not the prosaizer, but he thoroughly understood this work, and when he (Mr. Skerchly) left Venezuela, as he hoped to do next September, with bar gold, he felt sure he could leave that gentleman behind with confidence.

Mr. PENNELL said he had every confidence in the mine, and had applied for 125 shares in the company.

Major DESPARD said he had meddled in gold mines for some time, and had at last made up his mind to have nothing more to do with them, but his impression of this mine was such that he was induced to take shares in the company. The circumstance was almost unheard of—a vendor, through his extreme confidence in the mine, agreeing not to place any shares upon the market for 12 months. They all knew gold mining was a venture, but he hoped on that occasion it would be proved they had got hold of a capital property. (Hear, hear.)

The SECRETARY, in reply to a SHAREHOLDER, said that the amount to be paid to the vendor was 45,0000 in cash and 45,0000 in shares.

The CHAIRMAN said the vendor had as yet only received the promotion money, and he would not receive a particle of the purchase-money until the company had 25,0000 working capital. In the company's 750 acres of property there was enough length of lode to cut up into 20 or more mines, and eventually he expected they would do it. Another great point in their favour was that they had good water-power.

Mr. SKERCHLY said there was a railway being made in the country which would greatly facilitate transit, and would also benefit the company, inasmuch as they would not have to pay so much for carriage. Labour also he believed he could place very in the course of the year, and the healthy climate of West Callao.

After some little further discussion the proceedings were brought to a close with a vote of thanks to the Chairman.

#### PEN-YR-ORSEDD LEAD MINING COMPANY.

An ordinary general meeting of shareholders was held at the company's office, Great St. Helen's, on Wednesday.

Mr. M. J. BARTLETT in the chair.

Mr. JOSEPH WOOD (the secretary) read the notice calling the meeting, and the minutes of the previous meeting, which were confirmed.

The balance-sheet and agents' report were taken as read.

The CHAIRMAN: Gentlemen,—In proposing that the balance-sheet, together with the agents' report, both of which have been taken as read, be received, adopted, passed, and allowed, I will make a few comments in regard to the statement that has been in your hands for some few days. The balance-sheet, which was presented to you at the last annual general meeting, showed liabilities to the amount of 874. 18s. 9d., and, practically speaking, no assets beyond the mine, what ever its value was. Since that time, of course, we have created further capital, and a portion of that has been realised, together with the 1500 surrendered vendor's shares. At the last meeting, though I endeavoured to make a plain statement and simply to dwell upon the positive prospects of the mine, there was great difficulty experienced in inducing our shareholders to come forward and take up any of the shares. However, having always, and so to speak, pledged myself to the mine, believing in its ultimate great value, and so many friends came forward and subscribed for by far the largest amount of shares that were allotted on that occasion, with the result that, instead of having a liability of 874. 18s. 9d. at this time, we have actual assets to the amount of 13517. 4s. 1d., with liabilities to the date when the balance-sheet was made up to the extent of only 211. 5s. 1d. I may say that since then that small sum has been discharged. I do not think there is any item in the balance-sheet that will require further explanation, but, of course, we are here to answer any questions that may be put. With regard to the general working of our mine, I will now offer a few remarks. At the last meeting, you will recollect, we were operating towards the lode at the 122, but were stopped by a piece of ground running into our set and being given to the Rhosmor Company, which we were negotiating for, and I fully hoped at that time that we should obtain the grant of it. I have a plan before me which clearly proves the justice of my remarks on that occasion, that, although it was all important for the Pen-yr-Osredd Company to acquire that small grant, it could be no possible value to the Rhosmor Company itself. Some short time after the meeting our negotiations entirely failed. The Rhosmor Company refused to cede to us the piece of land, and consequently it was not deemed advisable to drive our 122 level further. I do not wish to make any unfavourable comment on the actions of the directors of the Rhosmor Company; but still, what their object could have been I cannot understand. The result was that we were left to fall back upon our 150 level, and to drive our cross-cut as fast as we possibly could. I find, on reference to the speech I made on that occasion, that it was decided that we should push on the 150, but I pointed out that only in dry weather could we operate at the depth. Of course when we had excessive floods, the water rose above the 150, and retarded progress. Soon after our general meeting, however, the Halkin Tunnel Company tapped a very large quantity of water in the course of their operations, which released the water considerably from the Pen-yr-Osredd. It then became a question whether it was advisable to continue the driving of the 150 or to take advantage, as we thought then, of the complete drainage of the set and sink our shaft until it came into what is termed the productive bearing formation of the district. Although in the 150 we had most favourable features in regard to the probability of finding lead, still there was evidence when we sunk a little below the 150 that an entire change of ground was coming in the bottom of the shaft. I, therefore, after consultation with the local directors and Mr. Prince, decided that it was more in our interest to continue sinking the shaft than driving the cross-cut, more espe-



cially as the lode dips rapidly towards the shaft. To give you some idea of this, if we had struck the lode at the 122, it would have been in this narrow neck of land, belonging to the Rhosmor Company. At the 150 it would have been quite 30, if not 40 yards in our own boundary, but at the 165 I expect we shall find either the lode in the shaft, or else within a yard or two of us. Mr. Prince, in his report, stated that we were able to sink 11 yards, and, of course, we expected every day to get into what we term the rich or productive bed of ground. It was just about the time I was paying the mine a visit when the men put in their last blast, which went through into soft ground, and tapped the water, which has since hindered us. There was no doubt that we did then strike these measures, and it was hoped, after a certain time, that the water would have subsided, especially as the tunnel was drawing nearer to us every day. However, we found that the water did not recede; on the contrary, in consequence of the wet weather which we have had during the last few months, the water further rose in the shaft. It was thought not advisable by the directors to work either at the 122 or at the cross-cut—in fact, we thought it best to husband our resources, and wait until the Halkin Tunnel had completely drained us, when I have not the slightest doubt myself that in sinking another yard or so we shall reach the great lode. Now, in reference to the prospect of our complete drainage at an early date, I will read you a letter received from our manager, Mr. Prince, this morning. He says:—

"We have been visited, in common with other places, with heavy storms of wind and rain, and all through this unprecedentedly wet season the heavy fall of rain took place during the last two days. All the rivers have overflowed their banks, but the effect on the water at Pen-y-Osred is almost nil to-day; it is now nearly 10 yards below the 150 level, thus clearly demonstrating the fact that down to a certain depth we are effectively drained. The Halkin Tunnel is now driven 630 yards from the South Pant-y-go shaft. The distance between this shaft and the Rhosmor engine-shaft is 800 yards. The Westminster lode runs between the two, and at the 140 yard level would be 110 yards north of the Rhosmor shaft, so that, allowing for the underlay of the lode, the Tunnel Company have only 60 or 70 yards to drive before cutting the Westminster lode, which will immediately drain off the Rhosmor water; and as the connection with ours has been fully proved, the rise and fall being the same in both mines, there is not the least doubt that our set will be dry to a depth of 220 yards from surface in the course of the next six weeks; the rate of progress in driving the level being about 50 yards per month."

Gentlemen, I think you will consider this very satisfactory, as you will see that, notwithstanding the very heavy floods that have been experienced, we have less than 2 yards of water in the shaft, and with every prospect of the mine being completely drained to a depth of 220 yards in six weeks or less. As far as royalties are concerned, several of our shareholders have written to me, not knowing what terms we should have to pay the Tunnel Company. The Rhosmor royalty is, as you know, very heavy—2½ per cent—but in our case it is only 2½, although we do not have the Rhosmor. There have been offers made to us—now that shareholders seem so satisfied that they will get back something for the money that has been spent—to take up a portion of the 2268 shares that we have in reserve. I think, as a member of the board, we ought to be very careful as to issuing any more shares. We have ample money to go on with, we have no liabilities, and when Pen-y-Osred becomes drained as anticipated it is simply a question of placing as large a force of men as we possibly can into the shaft for the purpose of sinking it until it comes to the lode, or junction of the lodes, and then I trust, and fully believe, that we shall derive from these lodes a return sufficient to pay not only the whole cost of the mine, but yield us handsome dividends. If, however, the directors, on the complete drainage of the set, are of opinion that more extensive operations should be carried on at the mine, I believe we have your confidence in the matter, but you may rest satisfied of this, that unless we think it necessary to do so we shall not issue those shares. For the present they will be kept in reserve, because the 13500, we have in hand will last some time. One other point you may ask—"Supposing when the ore is obtained will it take a long time in order to construct dressing floors for treatment?" Well, I may tell you that the ore that is raised at the Halkin Mountain comes out pretty pure. There will be little crushing required, so that in all probability an outlay of something like 1500, will give us a floor to commence upon to return 50 tons a month or thereabouts, so that on any points we touch upon I do not foresee any large expenditure. At any rate, we have now no necessity to ask the shareholders to subscribe one single penny-piece, and I think it is a mark of confidence in the mine that, under the circumstances, considering how dull the price of lead has been, and how that lead shares, I may almost say, have been unsaleable, we can present to-day such a satisfactory balance-sheet, and show that what shares have been placed have been placed amongst myself and friends, who have a full knowledge of what the property is worth. We believe that in the future we shall have some great reward for our trouble. (Cheers.) He concluded by moving the adoption of the balance-sheet and the directors' report.

Mr. BLACKETT: How long will this 13500, last?—The CHAIRMAN: We could not put more than 12 men into the shaft at once. That would cost us 1000, per month if we were to continue our operations at sinking the shaft only.—Mr. BLACKETT: When do the directors expect that the draining will take place?—The CHAIRMAN: It cannot be delayed longer than six weeks.—A SHAREHOLDER: How much of the 13500, is actual cash?—The CHAIRMAN: The whole of it nearly.—Mr. BLACKETT then seconded the motion, which was carried unanimously.

Dr. KENNEDY proposed, and Mr. ARTHUR seconded, the re-election of the retiring directors—Messrs. E. J. Bartlett and F. Gamble—which was unanimously agreed to. Mr. J. B. Eames having been re-appointed auditor to the company, and a vote of thanks having been accorded to the Chairman, the proceedings terminated.

#### EAST ROMAN GRAVELS LEAD MINING COMPANY.

An extraordinary general meeting of shareholders was held at the company's offices, Austin Friars, yesterday, for the purpose of considering the present position of the company.

Mr. E. EDWARDS presided.

The SECRETARY read the notice convening the meeting, after which the following report from Capt. Arthur Waters, the manager of the mine, was read:—

Feb. 1.—The 109 south is driven beyond the shaft, and cut 38½ fms. lode throughout varying in width from 2 ft. to 6 ft. and on the average 3½ ton of lead ore and ½ ton of blende per fathom. The last 7 to 8 fms. driven shows two divisions of lode, with in places 20 and 30 cwt. of lead ore, and 1 ton to 30 cwt. of blende per fathom. The lode in present south end is 4 ft. wide, with 1 ton of lead ore and ½ ton of blende per fathom, and letting out a strong feed of water. This point is now about 5 to 6 fms. from being under Crawshaw's winze, which is sunk 5 fms. below the 97, at the junction of the lode. With this winze through (and the 109 would be up to it in a month from now) the whole of the lode, from winze north to shaft, would pay for stopping. The 109, going north, will be a point 8 fms. from the said south end, on a lode 5 to 6 ft. wide, which is making a way behind the main level, is worth 1 ton of lead ore and stones of blende per fathom. From all we can see, this lode may be standing to the west of the 97, 86, and 75 fms. levels, and driving north-west, as we are at present, will be the key to future operations in regard to proving the ground in that direction. In Roman Gravels there is a lode seen parallel to and standing to the south of East Roman's main lode, and this may have formed a junction with the above in the before-mentioned 109 fms. end in the latter mine. I have been officially informed that the Roman Gravels directors refuse to comply with our request requesting an extension of the boundary northwards on our counter, or main lode; and although this may interfere with an immediate success at East Roman's, nevertheless, by sinking boundary shaft continuously for, say, 25 to 30 fms. in two lifts, all the runs of ore which the 20 fms. of new ground refused to us are known to contain, will dip from Roman Gravels set into our set, and we should be able to work them without thanks to anybody, and also free from any extra tax as to royalty.

We could sink the shaft 3 fms. case and divide, including ladders and stages, for about 3500, would remain a rock-drill could be used in deeper than the shaft. The 97 south is suspended, and the men put to stop the roof 3 fms. behind the end on a lode in soft ground, the yield being 3½ ton of lead ore per fathom. In one place the lode is worth 2 tons per fathom. The four stops above the 97, adjoining the Nos. 1 and 2 winzes, are worth together 3 tons per fathom. We propose to offer all the ground above the 97 on tribute, at a standard of 6d. per ton of dressed ore, men paying all cost, including dressing of the ore, fixed at 20s. per ton. By working the mine in this way, and opening out the two lodes in the 109 we are now doing on tribute, we calculate upon getting 20 tons of lead ore and some blende per month, and meet all the working cost, excepting the expense of deepening the engine-shaft, which we estimate at about 500, per month. In conclusion, I would remark that the lode along the back and bottom of the 1-9 shows more character, is better charged with ore (lead and blende) than any other level in the mine in corresponding ground above, and I feel persuaded that by deepening the shaft runs of ore will come in to it from the adjoining mine, which will make the success of East Roman a matter of certainty. Ore sale of 15 tons of lead ore to-day realised 1300, 10s.—ARTHUR WATERS.

The SECRETARY read a statement showing that the excess of liabilities over assets was about 30000.

The CHAIRMAN said he had now to ask whether the secretary had received sufficient subscriptions to make up the 50000, of debentures, which would render it unnecessary to proceed with the resolutions?—The SECRETARY replied that he had not had any further response.

The CHAIRMAN said that two circulars had been issued since their last meeting to the shareholders, making four in all, besides letters written to some of the shareholders on the subject, asking them to subscribe 50000, of debentures, in order to put the company in working order, and enable the directors to pay its liabilities, and beyond what was subscribed on the second application out of the four or five there had been no response whatever. Mr. Murchison had also made a personal application to creditors in Shrewsbury and shareholders in Wolverhampton without any effect, so far as the shareholders were concerned. The total amount subscribed being only 22000, the directors had no alternative but to propose the resolution for liquidation.

On the proposition of the CHAIRMAN, seconded by Mr. BUSH, it was then resolved, "1. That it having been proved to the satisfaction of the meeting that the company cannot by reason of its liabilities continue its business, it is advisable to wind up the same. 2. That the East Roman Gravels Lead Mining Company (Limited) be wound up voluntarily."

Mr. MURCHISON proposed, and it was seconded by Mr. HALES, and agreed to, that Messrs. Edwards and Thomas Bush be appointed liquidators at a remuneration of 50 guineas each.

Mr. HALES then proposed the subjoined special resolution:—"That the liquidators this day appointed shall be, and they are hereby empowered and authorised to sell and dispose of the lands, mines, mineral properties or rights, and all other property of the company, of what nature or kind soever, for a sum in cash sufficient to enable the said liquidators to pay and discharge in full all debts and liabilities of the said company, and the costs, charges, and expenses of all parties, properly incurred, or to be incurred, in or about the winding-up of the company, and not exceeding 25,500 shares in a joint-stock company (limited) about to be formed, with a capital of 30,000, divided into 30,000 shares of 1s. each, such shares not exceeding 25,500 in number, to be issued to the said liquidators or their nominees within three months after any allotment of shares taking place in the said intended company as shares paid up to the extent of 1s. on such share, such nominees being shareholders of the East Roman Gravels Lead Mining Company (Limited), who have accepted in the proportion of one share for every

share held in the last-mentioned company, and any such shares as shall not be accepted by any such shareholder as aforesaid, shall be retained by the directors of the said new company, together with the remaining shares to make up 30,000, to be dealt with at the discretion of the said new company, as they, the said directors, shall deem expedient."

The resolution was seconded and carried.

Mr. BUSH said he thought it a great pity the shareholders did not respond to the applications to subscribe the debentures, for he thought there could be no doubt they had a very good property, which would now be lost to them. He had been a shareholder in the mine since 1872, and if any other company was formed he should be very glad to take some shares in it.

The CHAIRMAN said he liked agreed with Mr. Bush. He always had great faith in this mine. It was a great pity the shareholders did not come forward, and rescue this property from being lost. Here they were to-day without a single response.

Mr. BUSH said they had laid out a considerable sum in machinery, in order to develop the mine. They had laid out 6000, he might say, lately, and they had got everything into complete order. It was true the price of lead was a great drawback, but he thought it was a great mistake on the part of the shareholders in not coming forward. Unless they did come forward and a new company was formed, they would lose their capital. He was over at the mine in the summer, and was very pleased to see the improvements that were being made—the alterations in the pumping machinery, and so on.

A vote of thanks to the Chairman terminated the proceedings.

#### PROVINCIAL STOCK AND SHARE MARKETS.

CORNISH MINE SHARE MARKET.—Mr. S. J. DAVEY, mine share-dealer, Redruth (Feb. 1), writes:—Our market has been flat throughout this week, and prices have declined. Rumours that a heavy premium will be charged for Dolcoath new lease caused a semi-panic in these shares, and they fell 4. Carn Brea have fallen 3, Cook's Kitchen 1, East Pool 1, Tincroft 1, and West Kitty 1. To-day market is inactive with sellers of most shares. Closing quotations herewith:—Blue Hills, 3½ to 4; Carn Brea, 7½ to 8; Cook's Kitchen, 34 to 35; Dolcoath, 62 to 63; East Pool, 49 to 50; East Tincroft, 11 to 12; Killfret, 9 to 10; Mellanear, 4½ to 5; New Cook's Kitchen, 5 to 6; New Kitty, 2½ to 3; Penhall, 3½ to 4; Phoenix, 2½ to 3; Pedan-drea, 2 to 2½; South Condurrow, 9 to 9½; South Crofty, 10 to 10½; South Tolarne, 4½ to 4¾; South Wales, 7½ to 8; Tincroft, 6½ to 6¾; West Basset, 6½ to 6¾; West Franches, 6½ to 6¾; West Polbrean, 6½ to 6¾; West Poldice, 1 to 1½; West Tolgus, 15 to 16; West Tolarne, 16½ to 17½; Wheal Agar, 16½ to 17; Wheal Basset, 7½ to 7¾; Wheal Grenville, 7½ to 7¾; Wheal Pevor, 4 to 4½; Wheal Kitty, 1½ to 1¾; Wheal Uny, 4½ to 5; Wheal Coates, ¾ to ¾.

Messrs. ABBOTT and WICKETT, stock and share brokers, Redruth (Feb. 1). The market has been very dull during the past week, and nearly all shares are lower. Dolcoaths have been pressed for sale, and close at a reduction of 5. Subjoined are the closing quotations:—Blue Hills, 3½ to 4; Carn Brea, 7½ to 8; Cook's Kitchen, 34 to 35; Dolcoath, 62 to 63; East Pool, 49 to 50; East Tincroft, 11 to 12; Killfret, 9 to 10; Mellanear, 4½ to 5; New Cook's Kitchen, 5 to 6; New Kitty, 2½ to 3; Penhall, 3½ to 4; Phoenix, 2½ to 3; Pedan-drea, 2 to 2½; South Condurrow, 9 to 9½; South Crofty, 10 to 10½; South Tolarne, 4½ to 4¾; South Wales, 7½ to 8; Tincroft, 6½ to 6¾; West Basset, 6½ to 6¾; West Franches, 6½ to 6¾; West Polbrean, 6½ to 6¾; West Poldice, 1 to 1½; West Tolgus, 15 to 16; West Tolarne, 16½ to 17½; Wheal Agar, 16½ to 17; Wheal Basset, 7½ to 7¾; Wheal Grenville, 7½ to 7¾; Wheal Pevor, 4 to 4½; Wheal Kitty, 1½ to 1¾; Wheal Uny, 4½ to 5; Wheal Coates, ¾ to ¾.

Mr. J. H. REYNOLDS, stock and share broker, Redruth (Feb. 1), writes:—The market for the past week has been dull, and prices for all stock lower. Dolcoaths, on the rumour of the lord of the mine intending to inflict a money payment for the grant of a new lease have receded 3½ per share and close at quotations. Subjoined are the closing quotations:—Blue Hills, 3½ to 4; Carn Brea, 7½ to 8; Cook's Kitchen, 34 to 35; Dolcoath, 62 to 63; East Pool, 49 to 50; East Tincroft, 11 to 12; Killfret, 9 to 10; Mellanear, 4½ to 5; New Cook's Kitchen, 5 to 6; New Kitty, 2½ to 3; Penhall, 3½ to 4; Phoenix, 2½ to 3; Pedan-drea, 2 to 2½; South Condurrow, 9 to 9½; South Crofty, 10 to 10½; South Tolarne, 4½ to 4¾; South Wales, 7½ to 8; Tincroft, 6½ to 6¾; West Basset, 6½ to 6¾; West Franches, 6½ to 6¾; West Polbrean, 6½ to 6¾; West Poldice, 1 to 1½; West Tolgus, 15 to 16; West Tolarne, 16½ to 17½; Wheal Agar, 16½ to 17; Wheal Basset, 7½ to 7¾; Wheal Grenville, 7½ to 7¾; Wheal Pevor, 4 to 4½; Wheal Kitty, 1½ to 1¾; Wheal Uny, 4½ to 5; Wheal Coates, ¾ to ¾.

Mr. M. W. BAWDEN, Liskeard (Feb. 1), writes:—The mining market shows no perceptible change of improvement, the amount of business transactions are exceedingly limited, and prices mostly nominal. At West Mary Ann meeting held on Tuesday last a call of 5s. per 3000th share was made. Subjoined are the closing quotations:—Bedford United, 1½ to 1¾; Carn Brea, 7½ to 8; Cook's Kitchen, 34 to 35; Dolcoath, 62 to 63; Devon Consols, 5 to 5½; East Caradon, ¾ to 1; East Pool, 49 to 50; Glasgow Caradon, ¾ to ¾; Gawton United, ¾ to ¾; Gunnislake (Clitters), 2½ to 2¾; Herodfoot, ¾ to ¾; Hingston Down, ¾ to ¾; Killfret, 2½ to 3; Marke Valley, ¾ to ¾; New West Caradon, ¾ to ¾; North Herodfoot, ¾ to ¾; Old Gunnislake, ¾ to ¾; Phoenix United, 2½ to 3; Prince of Wales, ¾ to ¾; South Caradon, 2½ to 2¾; South Condurrow, 9 to 9½; South Crofty, 9½ to 10; South Durrow, 9 to 9½; South Franches, 7½ to 8; Tincroft, 6½ to 6¾; West Basset, 6½ to 6¾; West Franches, 6½ to 6¾; West Kitty, 1½ to 1¾; West Mary Ann, 1 to 1½; West Pevor, 5 to 5½; West Phoenix, ¾ to ¾; West Seton, 17 to 17½; Wheal Agar, 16 to 16½; Wheal Basset, 7½ to 8; Wheal Crebtor, 2 to 2½; Wheal Grenville, 7½ to 8; Wheal Hony and Trelawny, 1½ to 2; Wheal Kitty, 1½ to 1¾; Wheal Lane, ¾ to ¾; Wheal Pevor, 3½ to 4; Wheal Uny, 5 to 5½.

Mr. JOHN CARTER, mine sharedealer, Camborne (Feb. 1), writes:—The chief feature during the week has been a rush to sell Dolcoaths shares amounting to almost a panic. The value of the mine has declined about 20,000, caused by a rumour that Mr. Basset is asking a premium for the renewal of the lease which expires in five years time. Other mines in the neighbourhood are weaker in sympathy, and have become almost unsaleable. Closing quotations are annexed:—Carn Brea, 7½ to 8; Cook's Kitchen, 34 to 35; Dolcoath, 62 to 63; East Pool, 49 to 50; Killfret, 3 to 3½; Mellanear, 4 to 4½; New Cook's Kitchen, 5 to 5½; New Kitty, 2½ to 3; Penhall, 3½ to 4; Phoenix, 2½ to 3; Pedan-drea, 2 to 2½; South Condurrow, 9 to 9½; South Crofty, 10 to 10½; South Franches, 7½ to 8; Tincroft, 6½ to 6¾; West Basset, 6½ to 6¾; West Franches, 6½ to 6¾; West Polbrean, 6½ to 6¾; West Poldice, 1 to 1½; West Tolgus, 15 to 16; West Tolarne, 16½ to 17½; Wheal Agar, 16½ to 17; Wheal Basset, 7½ to 7¾; Wheal Grenville, 7½ to 7¾; Wheal Pevor, 4 to 4½; Wheal Kitty, 1½ to 1¾; Wheal Uny, 4½ to 5.

MANCHESTER.—Messrs. JOSEPH R. and W. P. BAINES, share-brokers, Queen's Chambers, Market-street (Feb. 1), write:—A moderate amount of general business is reported in miscellaneous share investments for the past week, prices realised exhibiting very small, if any, alteration from those recently obtained. No single class shows any marked activity, and beyond a general firmness in quotations for corporation stocks, &c., and similar steady investments, prices are not moved distinctly in either direction. British rails have had an irregular market, owing to dividend rumours and announcements being contradictory and to the influence of traffic returns. In foreign rails Mexicans have had a steady and decided advance, the rise on the week amounting to between 9 and 10 per cent. Foreign funds unsettled and sluggish, French politics accounting in some measure for the uneasiness. Egyptian Unified are ¼ lower; but Spanish 4 per cent. show a rise of ½ to ¾.

BANKS are fairly active, producing more than a proportion of the week's miscellaneous business; but changes in quotations show a little ease in this market. Manchester and County record a rise of ¼, and with the exception of a similar advance on sellers' price of Lancashire and Yorkshire, this is the only upward movement. The adverse changes are very slight, however—Liverpool Commercial, ¼; Union of Manchester, ¼; and Consolidated, ¼ lower; and Manchester and Liverpool District, buyers ½ down.

INSURANCE still very slow in dealing. Quotations show a few alterations, which are pretty evenly balanced between the higher and lower. Sellers have revised their demands in the case of Manchester Fire and Equitable Fire, the former being put ¼ up and the latter a similar fraction down. Actual changes are—Higher: Liverpool and London and Globe, ¼; Royal Liverpool, ¼; British and Foreign Marine, ¼; Manchester Underwriters, ¼; and Maritime, ¼. Lower: Commercial Union, ¼ to 1; Reliance Marine, ¼; and Sea, ¼. Coal, Iron, &c., and Miscellaneous.—This market continues sluggish, and the balance of changes in values is adverse. Some few concerns show distinct variations, notably Telegraph Construction and Maintenance, which are better, and Tharsis Sulphur and Copper and Nant-y-Glo and Blaauw preferred, decidedly lower. Boleckows and Ebbw Vale quiet, and both easier. Canadian Copper and Sulphur nothing doing. Patent Nut and Bolt are trifle better on buyers' figure.—Higher: Telegraph Construction and Maintenance, 1; Sheepbridge Coal, &c., A, ¼; and Ashbury's, new, ¼. Lower: Tharsis Sulphur and Copper, ¾; Nant-y-Glo and Blaauw Coal, preferred, 2 to 3; West Cumberland Steel, ¾; Boleckow, new, fully paid, ¾; ditto, 12s. paid, ¾; Palmer's Shipbuilding, ¾; Rio Tinto, ¾ to ¾; and Ebbw Vale Steel, &c., ¾ to ¾.

COTTON SPINNING, &c.—Throughout the week business in these shares has been dull but steady; to-day a better feeling is apparent, owing probably to some announcements of profits coming above expectations, and rather better prices rule; but still, business does not assume great proportions, in consequence of holders putting up prices beyond buyers' inclination to follow.

TALPOT'S have been very quiet, two transactions in Anglo deferred being all the business therein reported here for the week. These are ¾, and Globe ordinary ¼ lower, whilst Western and Brazilian are ¼ higher.—TELEPHONE: Lancashire and Cheshire have a slightly falling market, several transactions being marked at decreasing values; for the week they show a fall of 1s. to 1s. 3d. per share. United also exhibit a decline of ¼, though they have been slightly worse still.—CANALS are not changed much, nor is much going on therein. Rochdale Canal is credited with an advance of 1 on buyers' offers, and Bridge-water ordinary is ¼, and ditto, preferred, ¾ to ¾ higher.—CORPORATION STOCKS, &c., very firm, and the following show enhanced prices: Oldham Corporation Debentures, 1 to 1½; Blackburn Corporation Debentures, 1 to 1½; and Manchester Corporation Stock, 1.—MISCELLANEOUS in many instances show revision of quotations, but only in a few is the change worth mentioning. Anglo-American Brush Electric have fluctuated, and on balance mark a gain of ¾. Westhams lower, on publication of balance-sheet showing a decided loss. Hudson's Bay, ¾ to ¾; Bodega, ¾; and Manchester Carriage Company, ¾ to ¾ higher; and West India and Pacific Steamship ¼ lower.

TELEGRAPH.—The general condition of the market is irregular, accounted for by adverse (or otherwise) rumours as to dividends and traffics of the lines interested. For Scotch Stocks there has been a decided demand, and both Caledonian and North British rose distinctly, prices for the former being maintained, whilst the latter have suffered in sympathy with movements hereafter mentioned. Great Westerns have to-day announced a dividend of 7½ per cent

per annum, and as 7½ was expected, price of the stock fell rapidly, and the whole market was adversely influenced. London and Midlands being especially affected. Brighton, A's, have again recovered most of their decline, and close good at 118½ to 119½. The North Stafford dividend of 3½, against 3½, was a favourable surprise, and their stock rose to 85½, but best figures are not maintained. Taken all round the rest are steady. Canadians are irregular, the Grand Trunk traffic not being considered satisfactory, although the cause is a "snow block;" their price has declined. Great Westerns are well sustained, and record an advance of ½. Americans have gone sluggish again, and most descriptions weaker, Ohio Mortgage Bonds being an exception, the 2nd and 3rd exhibiting substantial improvement.

#### SCOTCH MINING AND INDUSTRIAL COMPANIES SHARE MARKETS.

STIRLING.—Mr. J. GRANT MACLEAN, sharebroker and ironbroker (Feb. 1), writes:—During the past week the market has been quiet, and prices are generally inclined to improve, owing to the favourable accounts of trade and the easier tendency of the money market. Although trade is quiet credit is generally satisfactory, and as the time for the usual spring activity draws near business will likely get brisker.

In shares of coal, iron, and steel companies there is no particular change to notice. In the Scotch pig-iron market the price of warrants has declined from 48s. 3d. to 47s. 5½d. Business is quiet both at home and abroad, although the prospects are by no means bad, and the present price a tempting one for investors; purchases are not freely made. This inactivity will likely go away before long, and in the meantime advantage should be taken of the dull market by purchasers. Alltami shares are at 20s. to 30s.; ditto, Bonds, 7 to 7½; Clackington Iron, 35s. to 40s.; Chapel House Colliery, 7s. 6d. to 12s. 6d.; Orma and Cleland, 20s. to 22s.; and West Cumberland, 13 to 14.

In shares of foreign copper and lead concerns there has been a fair amount of business done. Tharsis improved at one time to 35½, but have since declined to 32½. Panulicolas are steady owing to their report for the last six months showing a great profit. Australian are at 27. 6d. to 32. 6d.; Bratberg, 35s. to 40s.; Canadian, 20s. to 21s.; Pierrefitte Ordinary, 15s.; Sentein, 10s. to 15s.; and Soudab and Catir Alun, 15s. to 20s.

In shares of home mines business continues dull. Glasgow Caradons remain at 14s. to 15s.; their annual report just issued, although it shows a loss of 1220 on the year's working, is a considerable improvement on the previous year, and this improvement is expected to continue. The amount at debit of profit and loss is now 14380. Bodirris are at 1s. 3d.; Caruvarshire Great Consols, 15s. to 20s.; Devon Franchising, 5s. 6d. to 6s. 6d.; East Roman Gravels, 3s. 6d.; East Wales, 18s. 9d. to 21s. 3d.; East Blue Hills, 7s. 6d.; East Chisvinton, 15s. to 20s.; East Craven Moor, 5s. to 7s. 6d.; Frongoch, 20s. to 30s.; Gunnislake (Clitters), 47s. 6d. to 52s. 6d.; Great Wheal Worthy, 7s. 6d. to 10s.; Grogwin, 13s. 9d. to 15s.; Herodfoot, 6s. 3d. to 8s. 9d.; Hingston Down, 7s. 6d. to 10s.; Indian Queen, 5s. to 7s. 6d.; Killfret, 6s. to 8s. 6d.; Kith Hills, 5s. to 7s. 6d.; Marke Valley, 15s. to 17s. 6d.; Mulberry Tin, 20s.; Mounts Bay, 10s. to 12s. 6d.; North Buay, 5s. to 7s. 6d.; North Blue Hills, 5s. to 7s. 6d.; Old Sheepherds, 16s. 3d. to 18s. 9d.; Parkas, 5s. to 7s. 6d.; Parys, 5s. to 7s. 6d.; Pelym Wood, 3s.; Prince of Wales, 7s. 6d. to 10s.; Silver Hill, 7s. 6d. to 10s.; Tamar, 10s. to 14s.; Van United (new), 1s. 6d. to 3s.; Ystwith, 2s. 6d.; West Caradon, 20s. to 25s.; Wheal Comford, 30s. to 40s.; Wheal Kitty, 35s. to 40s.; Wheal Jane, 15s. to 20s.; Wheal Lusk, 2s. 6d.; Wheal George, 5s. to 7s. 6d.; Wheal Hony, 35s. to 40s.; Wheal Sisters, 15s. to 20s.; and Wheal Mary, 10s. to 15s.

In shares of gold and silver mines the principal alteration is an improvement on Richmond to 7½, owing to the dividend announced at 5s. per share. Ankankos are at 7s. 6d. to 10s.; Colombian Hydraulic, 5s. to 7s. 6d.; Callio Bay, 25s. to 27s. 6d.; Central Wynad, 5s.; Cankin Hamoos, 6s. 3d.; Crooke's Mining, 2s. 6d.; Eureka (New), 2s. to 3s.; Flagstaff, 2s. 6d. to 3s. 6d.; Great Southern of Mysore, 3s. 9d.; Guinea Canal, 10s. to 12s. 6d.; Hoover Hill, 2s. 6d. to 3s. 9d.; Indian Wentworth, 5s. to 7s. 6d.; Indian Consolidated, 5s. to 7s. 6d.; Isabella, 7s. 6d. to 12s. 6d.; Javalls, 3s. to 5s.; Kapangas, 15s. to 17s. 6d.; Last Chance, 2s. 6d. to 3s. 9d.; La Plata, 17s. 6d. to 20s.; Mysore Reef, 2s. 6d.; New Gold Run, 4s. to 6s.; Nundydroog, a 3d. to 8s. 6d.; New Callio, 7s. to 9s.; Organo, 47s. to 52s. 6d.; Orita, 27s. 6d. to 30s.; Ontario Silver, par; Rio Grande del Sul B, 21s.; Silver Peak, 2s.; Simons' Reef, 1s. 3d.; Scottish Pacific, 4s. to 5s.; West Callio, 5s. per share.

In shares of oil and miscellaneous companies prices are steady without much change. Home Mines Trust are at 17s. 6d. to 22s. 6d.; Lawes' Chemical, 5½ to 6½.

EDINBURGH.—Messrs. THOMAS MILLER and SONS, stock and share brokers, Princes-street (Jan. 31), write:—The reduction of the Bank of England Rate on Thursday has been followed by an improvement in railway stocks. Caledonian, which stood a week ago at 108½, has advanced to 110½; Glasgow and South-Western has risen from 119 to 121½; Great North of Scotland from 53½ to 55½. Several preference stocks show a rise of ½ to 1, and in North British (No. 1) it has been 1½ from 104½ to 106½. Canadians are better; Grand Trunk (3 per cent.) have gone from 60½ to 61½; Great Western from 16½ to 16¾. In American, most attention has been given to New York, Pennsylvania, and Ohio Mortgage Bonds; the first, after some fluctuations, closed to-day at 57½, as compared with 57¼ a week ago. In the second there has been an advance from 17½ to 20½. In mine, Arizona, after falling from 107½ to 99½, have rallied to 101s. In Tharsis the dealings have been more numerous than usual; the price, after recovering from 22½ to 35½, closed to-day at 34. In banks, Clydesdale have risen from 25½ to 25¾, Commercial from 55½ to 55¾; Union from 24½ to 24¾; while Royal has declined from 221 to 220. In insurance shares, City of Glasgow Life have gone from 6½ to 6¾; Life Association from 26 to 25½; Prairie Cattle fell from 10 to 9½, and recovered to 9¾; the second issue fell from 10½ to 9¾, and recovered to 9½; the third issue fell from 7½ to 6½, and recovered to 6¾.

#### IRISH MINING AND MISCELLANEOUS COMPANIES SHARE MARKET.

CORK.—Messrs. J. H. CARROLL and SONS, stock and share brokers, South Mall (Jan. 31) write:—Great Southern and Western stock remains in demand at 119½ to 120, and Midlands were done at 89½, and Bandons at 89 to 89½. No change in Limericks. National Banks were done at 23½ to 24, and Munster at 6 15-16ths. Nothing done in Provincials or Hibernians. Alliance Gas changed hands at 17½, and Dublin Tram at 9 15-16ths. Cork Steam Packets remain 11½ to 11¾, and Lyons shares 6½. Gresham Hotels were asked for at 3½, and Gouldings offered at 9. No change in others.

#### THE VAN MINE—MONTHLY REPORT.

Jan. 31.—In the 120 west the lode in the end is becoming harder, and more compact of late, and still producing lead ore, worth at present 30 cwt. of lead per fathom; there is still lode standing on the south side of the level. The cross-cut south behind this end has been driven 72 ft., and is now suspended for the purpose of taking down the lode in the west side of the cross-cut, in which direction the best gril rises which overlie the lead; we have six men here this month. The lode varies in produce from 10 to 30 cwt. of lead per fathom. In the 105 west we have a nice lode, containing small strings of lead and patches here and there, as yet hardly sufficient to value. In the 90 west we are at this point making fair progress towards Edward's shaft, and finding now and then small floors of lead. In the 75 west we have risen 9 ft. against Edward's shaft. In the 60 west we have sunk Edward's shaft 3 fms. 4 ft. The stopes throughout the mine are without any material change. The slope in back of the 60 west is finished, and the men removed to the 120 west.—Surface. All surface work is progressing regularly, including dressing. We have sold this month 500 tons of blende, and we sell to-morrow 240 tons of lead. The recent heavy storms have left their mark upon some of our buildings, but more especially upon the top reservoir, the walling of which has been much damaged, but not serious.—W. H. WILLIAMS.

From Mr. JOHN B. REYNOLDS.—The depression in the Mining Share Market continues, and has, indeed, been intensified during the week. Dolcoaths, East Pools, West Kitty, South Franches, West Bassets, and many others have been pressed for sale, and have found but few buyers. The most absurd rumours have been started and credited, with a view to forcing prices still lower; and many will probably have but too good reason to regret their folly in believing statements which are absolutely untrue. As a rule, trustworthy information can always be obtained from the officials of such firms as those we have named, and they should be enquired of. It is cheering to note in the midst of the prevailing gloom that there are a few mines which are attracting notice, and amongst these are certainly West Polbrean and Trevaunance. Orders to buy these shares have been returned, so very difficult has it been to find sellers. The explanation can readily be found in the very low prices of these stocks, and the exceptional prospects of the mines. Shares that can find buyers at this moment should indeed be enquired about at least, and it is not difficult to forecast the result of enquiries respecting these excellent properties. If New Kitty shares are exceptionally low, the fact should only bring forward buyers, for without this (or any other mine not on the eve of entering the Dividend List, or actually there) claiming freedom from the speculative element, we say that it will puzzle the most experienced to find a property with greater promise than New Kitty, the undertaking is certain to command firm adherents until its merits have been fairly and fully tested; and its progress will be watched most narrowly by those who are largely interested in West Kitty. But the question of the hour is still as to the future of tin. The question is not yet a vital one to the St. Agnes mines. They are the cheapest to work of any in Cornwall—within a similar range. Tin, at present, is at a capital price for this locality, and should (



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**KOBINOOR AND DONALDSON CONSOLIDATED.**—Mr. Alfred Rickard, in his report of work done at the Donaldson Mine for the week ending Jan. 6, states:—The cross-cut in the No. 1 level has been driven 6½ ft.; the object of this cross-cut is to intersect the main part of the lode. The No. 2 level is 427½ ft., yielding ¼ ton of smelting ore per square fathom; the vein of ore holds out, but does not improve in size; it is 2 in. thick and of good quality. A station is being made in the back of the No. 3 level preparatory to starting a rise destined to communicate with the No. 2 winze; the lode is strong and well defined in the upper part of the level; the ore is high grade and will improve in going up, and yield good stoping ground. The No. 3 winze is down 26½ ft.; the lode is going down with its usual strength and regularity, carrying 2½ ft. of mineral (low grade). The No. 4 level is in 249½ ft.; the lode having become small a cross-cut is being put out east to search for the main part of the vein. The No. 1 cross-cut in the 100 ft. level is in 23½ ft.; assays of the lower and upper streaks of the lode lately intersected give the following results: Upper streak, gold, 1 oz., silver, 7 ozs. per ton; lower streak, gold, 2½ ozs.; silver, 5 ozs.; besides which the copper contents average from 6 to 7 per cent. The lower streak is 1 in. wide and of good promise. Nothing further has been discovered in the No. 4 level; the main streak is 1½ in. thick, and carries in the branch a arsenical pyrites is 18 in. thick. The assay value of which is gold, ¾ oz.; silver, 2½ ozs. per ton. The stopes at the No. 2 level are doing fairly, yielding 1½ ton of smelting and 1 ton of concentrating ore per fathom. In the Champion Mine the timbering of the flats at the 200 ft. level has been finished, and the men put on enlarging the shaft below the 200. The stopes in the 200 ft. level west are looking well, yielding 4 tons of ore per fathom, and more smelting ore coming in. The 200 ft. level east is in 37 ft., and appears about the same as last week. The Telephone adit has been driven 161 ft., and yields 1 ton of ore per fathom. The directors have received a statement showing the result of the mill run of concentrates for the week ending Jan. 6, 1894. The mill concentrates produced as follows:—One lot (first class) yielded 3·33 ozs. gold, 7·94 ozs. silver, and 1·54 per cent. copper per ton. Another lot (first class) gave 3·20 ozs. gold, 10·30 ozs. silver, and ·69 per cent. copper per ton. A lot of the second class produced 2·66 ozs. gold, 5·94 ozs. silver, ·61 per cent. copper per ton.

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**LAKE SUPERIOR NATIVE COPPER.**—J. Williams, Jan. 5: I am pleased to say since my last of the 25th inst. we have continued to make steady progress. During the past month we have had a good deal of delay in sinking in No. 1 shaft on account of the pumps; we have now overcome the difficulty, and unless some unforeseen accident occurs we shall sink from 8 to 10 ft. per week. On sinking the following is the result of the tests as follows:—No. 1 shaft, 14 ft. 4 in.; No. 2 shaft, 16 ft. 2 in.; No. 1 level north, on the course of the lode, 23 ft. 3 in.; No. 1 level south, on the course of the lode, 52 ft. 10 in. There is no change in any of the points in operation since my last. I am now getting the Diamond drill placed at No. 1 level, No. 1 shaft, for testing the lode in depth, and the ground lying on and under the lode. The result of these tests I shall send on with my weekly report.

**PANULCILLO COPPER.**—The board has received on Jan. 30, from the company's manager in Chili, a wired message, advising that the Chili profits, for the six months ended Dec. 31, 1882, have amounted to 20,500*l*. Subject, therefore, to examination and audit, the accounts for the year 1882 will exhibit a net profit of about 36,150*l*., after providing for interest on debentures, remuneration to directors, and all London charges. Inclusive of the amount (145*l*. 11*s*. 11*d*.) brought forward by the directors, the sum to be submitted at last general meeting, and including the interim distribution of 15,000*l*. on Oct. 10, 1882, there will thus be a sum of about 22,600*l*. available for dividend and reserve on the annual accounts, which will be issued in April next.

**PIERREFITTE.**—Manager, Jan. 23: Some slight changes have occurred in the value of the lode, but on the whole it is about the same as during the last month. There is a change in the direction of the lode at the north of the slide; it seems to be going more to the right, and if it should continue I expect it will join the other branch of the lode, on which the former company wrought to some little extent. We have broken and sent to the floors 250 tons of ore, and dressed 50 tons of silver-lead and several tons of blende during the past week. I shall have a parcel of 100 tons of machiue-dressed lead sampled to-morrow. The weather has been very changeable lately. On Wednesday last the wind was blowing so strongly that we were unable to work the cable. We have still paid out 100 fms. on our machinery.

**PORT PHILIP AND COLONIAL GOLD.**—Dec. 19: Total quartz crushed for the month ending Nov. 28, 1888 tons. Total gold obtained, 433 ozs. 12 grs. Aver-

lot of the third ass produced 1'33 oz. gold, 8'30 ozs. silver, and a trace of copper per ton.

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age per ton, 4 dwts 18 grs. Receipts, including \$671. 19s. 6d. obtained from tributers; payments, including firewood, 1498s. 11s. 8d.; total, 328s. 4s. 11d.

**RUBY AND DUNDEBERG CONSOLIDATED.**—Report on the mines for the week ended Jan. 5: Dundenberg: The ground in 300 ft. upraise is very hard at present; progress this week, 7 ft.; total, 230 ft. above the 300. There is no change in the stopes now being worked on tribute. Two men, four contractors, and 12 tributers at work.—Home Ticket: The drift from the bottom of the perpendicular shaft has been advanced 5 ft. in ore during the week; total length of ore, 25 ft., with an average width of about 8 ft. At the stope above the 40 ft. west drift the ore is about 2½ ft. wide of fair grade. Have shipped 71 tons of ore this week, and have about 30 tons at the mine ready for shipment; 13 men at work.

**RICHMOND CONSOLIDATED.**—Telegram, Jan. 20: Week's run (No. 4 furance) \$12,000, from 328 tons of ore; refinery \$10,000.

—Samuel Longley, Jan. 8: The 100 south drift from station (station 16½ ft. deep has been run 26 ft. in shale. The 300 south-west drift from station has been run 11 ft. Total 237 ft. In hard favourable limestone. The 300 south-east drift from south-west drift has been extended 15 ft. Total 189 ft. In hard favourable limestone. The 300 rise over south-east drift has been risen 13 ft. Total 73 ft. Holed into 260 east drift. The 300 south-west drift from chute

gers per ton, 4 dwts 18 grs. Receipts, including £677. 19s. 6d. obtained from RUBY; payments, including firewood, 14984. 11s. 8d., total, 3232. 4s. 11d.

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**RICHMOND CONSOLIDATED.**—Telegram, Jan. 20: Week's work (No. 4) (furance) \$12,000, from 326 tons of ore; refinery \$10,000.

— Samuel Longley, Jan. 8: The 100 south-west drift from station contains 16½ ft. deep has been run 26 ft. In shale. The 300 south-west drift from station has been run 11 ft. Total 25 ft. In hard favourable limestone. The 300 south-east drift from south-west drift has been extended 10 ft. In limestone and ledge matter. Unfavourable. The 300 rise over south-east drift has been risen 13 ft. Total 73 ft. Holed into 200 east drift. The 300 south-west drift from chute under No. 16 chamber has been run 10 ft. on fissure in hard favourable limestone. The 700 north-east drift from main west drift has been run 9 ft. Total 208 ft. In very hard favourable limestone. The 700 south-west drift from main west drift has been run 7 ft. Total 151 ft. In very hard favourable limestone. The 700 north drift (near station) from east drift has been run 4 ft. Total 55 ft. In hard favourable limestone. The 700 rise from south-west drift (from east drift) has been run 10 ft. Total 25 ft. In hard limestone. No further indications. The 800 north-east drift from north-west drift has been run 10 ft. In limestone and ledge matter. Unfavourable. The 800 north-west drift from south-west drift has been run 20 ft. in limestone and ledge matter, face in hard limestone. The 800 rise from north-west drift from south-west drift has been sunk 4 ft. Total 16 ft. In limestone and ledge matter, commenced drifting. The 900 north-west drift from north-east drift from east drift from station has been run 16 ft. Total 182 ft. In favourable limestone. The 900 new west drift from north drift has been run 14 ft. Total 105 ft. In hard favourable limestone. The 900 north drift from north-west drift from north-east drift from east drift from station has been run 10 ft. Total 100 ft. In favourable limestone. The 900 south-east drift (under chute) has been extended 10 ft. Total 38 ft. In favourable limestone. The 1050 north-west drift from station has been extended 14 ft. Total 360 ft. In favourable limestone. The 1050 north-east drift from north-west drift has been run 13 ft. Total 89 ft. In crushed limestone.

**RIO GRANDE DO SUL (BRAZIL) GOLD.**—H. Eddy, Dec. 16: In No. 2 gallery west the principal part of the lode is 3½ ft. wide, but of too low quality to value. The other part is 1½ ft. wide, quality low. The both parts are still carried in the same drive, which is kept wide for the purpose; progress during the past month is 10 ft. The lode is of a quality that has been run 10 ft. In four fortnight's work; lode 4½ ft. wide, and highly mineralised as well as properly defined, but the ore is of too low a quality to stamp. In the cross-cut north-west the caunter has been met with, but is much broken up by the slide. The man employed here will now assist in sinking the shaft, making at the latter point a total of three persons employed by whom I expect to complete the shaft 10 fms. below No. 2 gallery early in April, so as to prove the lode in depth will all possible speed. The slope east of the eastern shaft contains a leader 8 in wide, producing 1 oz. of gold in the tin. There is no material change elsewhere.—Remittance, 25 tons of gold, on the 14th forwarded 10 ozs. 8 dwts. of gold, being the result of 25 tons of quartz run over.

**RIO GRANDE DO SUL GOLD.**—Jan. 31: Remittance, 21 ozs. 8 dwts. gold, the produce of 25 tons of quartz.

**RHODES REEF GOLD.**—Mine Manager, Jan. 8: The past week being the tail end of the holidays very little was done, as the Europeans were nearly all

away. They have been returned, and we make a fair start this morning. As the mill is in first-class order I do not anticipate further delay. We are crushing stone from the south end of the claim.

ST. JOHN DEL REY.—Telegram: Morro Velho, Jan. 30: Produce 11 days (24 divisions) of January, 6750 oits., value 2655; yield 3 oits. per ton.

TOCANTINS COOPER.—Telegram: 29 Jan. 1906: Caravelle Mill: No. 14 Level, East of the Skip-Shaft: The lode in this level yielded  $\frac{1}{2}$  ton of good quality copper ore per metre for a length of 7 metres; it is now become narrow and poor, but we think the falling off is temporary.—No. 13 Level, East of Skip-Shaft: The lode at this point is much the same as when last reported.—No. 12 Level, East of Skip-Shaft: We have suspended the driving of this level in order to strip it where wanted, and also to repair the tramroad. The lode still continues to yield fairly.—Winze sinking below the No. 12, East of the Skip-Shaft: This winze is also suspended for the time.—No. 11 Level, East of Skip-Shaft: The lode in this level is yielding a small quantity of ore, and altogether presents

strongly pronounced indications.—Winze sinking below the No. 11, East or Skip-Shaft: This winze was opened out some good tribute ground. This winze communicated with the No. 12 level. No. 10 level, West of Skip-Shaft: This level is being pushed on with all dispatch, there is no change in the lode worthy of notice. Winze sinking below the No. 10, East of Skip-Shaft: This winze is opening out some good tribute ground. We hope shortly to hole to the No. 11, as it is much needed for ventilation.—No. 10 Level, West of Skip-Shaft: We have suspended the driving of this level for the present, the lode being poor, and have set a tribute pitch, where the lode is productive.—Jose's Shaft: The enlarging and securing of this shaft is progressing satisfactorily, and we hope to reach the 290 level in the latter part of this month.—Winze sinking below the 270 West, Jose's Shaft: This winze is being sunk for the purpose of giving good ventilation at the bottom of Jose's shaft. The lode yields saving work.—Winze sinking below the 226 Level, West of Jose's Shaft: This winze is also being sunk for the same purpose as that in the 270 level. There are 25 tribute pitches, all of which are maintaining their usual yield. Number of metres driven on the course of the lode, 51-80; number of metres sunk on the course of the lode, 21-40; total number of metres of ground laid open, 73-20.—Percance Mine: We have made very slow progress in the shaft sinking below the 140 metre level during the

**NEW EMMA RIVER.**—George Cullino, Jan. 8: The shaft is now 95 ft. in depth, having made 6 ft. since my letter of the last inst.

**NUNDYDROOG GOLD.**—B. D. Plummer, Jan. 9: Stamping: I am pleased to inform you it works well, and we find no difficulty in procuring ample water for carrying on the work 10 hours a day with great regularity. Mining Operations: The Taylor shaft is now going on, and is sinking below the 95 in consequence of the influx of water, especially in winter; this is 2 ft. below the 95, and we shall not be able to sink any deeper without the aid of a pump. The lode is not changed since we started to sink; it is composed of mica schist and quartz, in which we find gold. The shaft in the bottom of the 95 the lode is compact and rather tight, the part we have in; the bottom is 2 ft. wide, but I think there is more in the lying side, which I intend to have taken down after a few feet more sinking. Just at this time we are flooded out of this pit by seeping water in the south end of the 95; it came out in a great flood; it filled up the workings below that level, and it overpowered the pumps; but we are making headway again, and I have no doubt we shall have the mine drained in a day or two. The 95 south end for the last week has been in a nip, and very tight; but last evening it broke through into old workings. We are not yet able to say what these old workings are like; but it would appear that the lode has been taken out from clay, as indications of old works can be seen at surface; this is about 90 ft. from our south boundary. The north end in the 95 remains pretty much the same as it has been for the last few weeks. The vein is 2 1/2 ft. wide, and there is a small rib of quartz on the footwall; the rest is mica schist stained with iron. The 95 at air shaft the north end looks very well; there is a fine looking lode of quartz fully 1 ft. wide; it contains some gold.—New Shaft: In the north end the lode has a better appearance; it is 3 ft. wide, containing brown quartz, micaceous slate, and iron stains. We washed some from this end this morning, and for the first time it gave a colour of gold.—Eastern Reef, McTaggart's Shaft: In the winze under the 70 the work has much the same appearance as I have before stated. The lode appears to be much wider than the winze, and I think the stuff we have got from it the last time was not so good. There is some iron, and is terribly hot, so that we must be satisfied with small progress in this place. In the 70 the lode is not so good as the 95, but there is little change, except the rock is more compact, and not so good to cut. All the work at surface goes on much as usual, and the steam-engines continue to do good work.

VICTORIA GOLD (Venezuela).—C. J. Danby, Dec. 20: A letter, of which the following is a copy, has just come to hand from the company's engineer, which the directors think is most satisfactory:—I beg to inform you that I have already taken possession of the Victoria concession, and commenced work. There has been some delay as regards the formal registration of papers, &c., also difficulty in getting men from the forest, where there is no accommodation. I have at present engaged a few Indians to open up new tracts in the forest, which covers the property; also three miners. Of course we have had to construct a kind of house, which has taken a day or two, with the men that could be spared. I have been further examining the property, and there is no doubt it is one of the finest in the country. The amount of quartz is incalculable. I still find water, which with a good reservoir would be a great aid as a motive-power, and in the wet season would run a mill. This is a mine in itself. I have already seen some fine specimens of gold quartz blasted from the outcrops. I hope to have the ton ready in a few days; the great trouble is the freight, as it will all have to go down on donkeys. I hope you will excuse further information until next mail, as I have at present no office, and am writing this on a dynamite box. I have been told that a ton of good quartz from the mine at present in London as a sample; this may possibly arrive before the end of the present month of February.

VICTORIA (LONDON).—Dec. 18: Total quartz crushed for month ending Dec. 6, 1828 tons. Total gold obtained, 560 ozs. 11 dwts. Average per ton, 6 dwts. 3 grs. Receipts, 1572*l*. 5*s*. 2*d*.; payments, 1406*l*. 11*s*. 6*d*.; profits, 165*l*. 13*s*. 8*d*.

**GAS SHARES.**—The principal business in these shares, according to this evening's report of Messrs. W. L. WEBB and Co., of the Stock Exchange, and Finch-lane, to have been—Bahia (Limited), 19½ to 19¼; Continental Union (Limited), 27 to 27½; ditto new, 159 and 157½, 18½; ditto pref., 37½; Gas Light and Coke, A ordinary, 183½ to 183¼; ditto C, 10 per cent. pref., 22½; ditto D 10 per cent. pref., 22½; Imperial Continental, 195½ to 200½; London, 210; Monte Video, 14½; Oriental, new, 6½; Rio de Janeiro (Limited), 24½ to 24¼; South Metropolitan, B, 192¾ to 193¼. Gas stocks firm, especially the London companies.

**INSURANCE SHARES** have, according to this evening's report of Messrs. W. L. WEBB and Co., of the Stock Exchange and Finch-lane, been dealt in as follows:—Alliance, British and Foreign, 37; Alliance Marine (Limited), 21½ to 22; City of London Fire (Limited), 1½; City of London Marine Corporation (Limited), 1½ to 1½; Commercial Union, 22½; Employers' Liability Association Corporation, 25½ to 24½½; London, 59 to 60; London and Provincial, 67½; London and York, 67½; Merchants' Marine (Limited), 14; Marine Insurance Co., 24½; North British, 23½; Oceanic, 16½; Royal Exchange, 15½; Rock Life, 37½; Standard Fire Office, 15 to 15½; Universal Marine, 6½; Imperial Fire, 139½. Insurance shares steady, and show signs of recovery from recent fall.

TRAMWAYS.—The closing prices of this evening, as quoted by Mr. W. ABBOTT, of Tokenhouse-yard, are given in tabular form in the last page of the Journal.

**RAILWAY AND GENERAL MARKETS.**—Referring to the course of business done to-day during official hours (11 to 3) Mr. Ferdinand R. Wink, business man, writes:—*Opening:* In addition to yesterday's fall of 3¢, in Great Western, due to the fact that the dividend is not to be paid, the market prices are selling because the dividend is but 7½%. To secure the same rate of interest from other railway stocks they will have to pay more than 142½, the present price of Great Western. Midland are in favour at 139½, here the dividend is 6½¢. Mexican Railway Ordinary have fallen 1 per cent. Eries are down to \$40. During the week there has been a further rise in Herodotus to 8s. to 10s., this has attracted some notice to the low price of North Herodotus. Investors have also paid some attention to North Blue Hills, a C&N book mine with 2s. 6d. called up. Organos and Orita have a firm appearance at 2½ to 2½ and 1½ to 1½ respectively. Prince of Wales, 6s. to 6s.; Wheel Crebor, 2 to 2½; Colombian Hydraulic, 6s. to 8s.; Sortridge, 4s. to 6s.; West Garadon, 1 to 1½; Tankerville, 5s. to 6s.; Langford, 3s. to 3s.; Leadhills, 2½ to 3; Fortuna, 3 to 3½; Indian Confederation, ¾ to 1½; Glenrock, ½ to ¾; New Sharieton, 5s. to 6s.; Rhymer, 1s. to 1½; and the Great Western, which has kept down the price of the home railway. A better tendency has been shown in foreign bonds, United being higher, Peruvians and Turks steady. The interruption in the traffic led to sales of Trunks, American shares remaining flat. Brush Lights moderately firm.

**GOLD AND SILVER.**—**Messrs. FICKLEY AND ABELL** (Feb. 1) write:—There has been no general demand for gold during the week, but a sum of about 60,000*l.* in bars was taken for export. The balance of the arrivals, consisting chiefly of sovereigns, has been sent into the bank, the amount so disposed of being 63,000*l.* We have received 45,570*l.* from the West Indies, 18,030*l.* from Sydney, and 57,000*l.* from Central America; total, 118,570*l.* Silver has been in good demand for India since our last, and a further improvement in value has taken place, from 55*½*d., at which price the bars by the steamer Taurar, and a portion of the bars by the Arica, were sold; the rate has advanced to-day to 55*½*d. per oz. standard. The arrivals since our last comprise 80,000*l.* from the West Indies, 25,000*l.* from the Pacific, and 31,400*l.* from New York; total, 136,400*l.* The P. and O. steamer Peshawar takes 110,000*l.*, and the Australia 34,000*l.* to India.

**ELECTRICITY AND FIRE-DAMP.**—The properties of electricity are explained in an entirely novel and amusing way by Mr. William Brown, of Glasgow, whose views, like those who believe in the attainment of perpetual motion in mechanics, are diametrically opposed to those of persons who have investigated the subject. He, of course, shows that Prof. Sylvanus Thompson's conclusions are all erroneous, and that the magnetic needle has been going the wrong way for the last 500 years. The Professor states that a dry warm glass tube, excited by rubbing it briskly with a silk handkerchief, will attract strongly a pith ball hung up by a fine thread from a support, showing that it is highly electrified. Mr. Brown states that this fallacy of substituting the red that is electrified for the one out of which the electricity has been rubbed, runs through the whole of the Professor's work, and is the leading principle on which he founds all his experiments, and from which he draws all his conclusions, and being founded on a fallacy, the whole is wrong. But Mr. Brown's notions about fire-damp are still more extraordinary. Fire-damp, as it is called, may, he admits, be partly hydrogen gas, but a more careful investigation may show that it is composed principally of electricity, and that it might be carried off to the well or sink at the bottom of the shaft on the principle of the lightning rod conductor or converted into light for the benefit of the miners. A well ventilated mine has, he says, been known to give off 900,000 cubic feet of explosive gas in five minutes, and he states that from experience it has been found that the best thing that can be done by a man rendered insensible by it is to bury him in the earth for a time, adding that this custom can be understood if it is meant by it to extract electricity out of his body by placing him in a good conducting material, but in no other way.

**WEST GODOLPHIN MINE.**—A very important improvement has taken place here. In the 80 east, on the caunter, the lode, which is imbedded in favourable granite, is worth 20*l.* per fm. for tin. This is a parallel lode, and in a similar stratum to the Great Work Mine adjoining, from which immense returns and very large profits were made in its previous workings. Judging from the nature of the lode in the bottom of the 70, an improvement was anticipated, but it has been met with several fathoms sooner than calculated upon, this showing that the tin ground is lengthening in depth.

**DIED.**—On Jan. 26, at Stillwood-road, Brighton, Maria Elizabeth, widow of J. McCrea, Esq., R.N., M.R.C.S. Eng.



keep adding on No. 1 lode has been set to four men, at 4¢ per fathom, the lode is  
 worth about 4¢. per fathom. We have three tribute pits working to the  
 of this, at 13a. 4d. in the 17. A stoep has been set to eight men in the  
 of this, at 13a. 4d. in the 17. A stoep has been set to eight men in the  
 men driving east on No. 2 lode, at 35a. per fathom, and four men driving west  
 at 27a. 8d. per fathom; the lode in both ends is worth about 3¢. per fathom, the  
 and we have also two shafts sinking for drawing and venting the 17. The level  
 driving on No. 8 lode has been set, at 27a. per fathom and 5a. in 14 tribute, the  
 lode is worth 1¢. 10a. per fathom. We have just commenced to sink the new



Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains.

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The colliery is in the midst of a very populous district, and the railway from Brussels to Cologne passes through the colliery, with a station at Langerwehe, about three-quarters of a mile from the works over a very good road. It is proposed first to erect the 40-horse-power pumping engine and boiler, and to erect a steam engine and boiler, and a small steam engine and boiler, and also the seams dipping out of the adjoining concession to the north into this colliery. The cost of this would not exceed \$5000, and by this means 50,000 to 60,000 tons of coal would be raised yearly. The cost of raising, including management, cannot exceed 3s. 6d. a ton. The selling price at his pit's



## TO THE METAL TRADE.

FOR COPPER, TIN, LEAD, &c., apply to—  
MESSRS. PELLY, BOYLE, AND CO.,  
SWORN METAL BROKERS,  
ALLHALLOWS CHAMBERS, LOMBARD STREET, LONDON.  
(ESTABLISHED 1849.)

JOHN G. EAST,  
NEWCASTLE-ON-TYNE.

BROKER FOR THE SALE OF PIG-LEAD, LEAD ORES,  
COPPER ORE, COBALT, MANGANESE, CARBONATE OF  
BARYTES ESTABLISHED 1866.

HENRY NUTT AND CO.,  
No. 119, BRISTOL ROAD, BIRMINGHAM  
PURCHASERS OF  
LEAD ASHES, LEAD SLAGS, SULPHATE OF LEAD, TIN  
ASHES, TERNE ASHES, AND ALL REFUSE CON-  
TAINING TIN AND LEAD.

HENRY WIGGIN AND CO.,  
(LATE EVANS AND ASKIN),  
NICKEL AND COBALT REFINERS  
BIRMINGHAM.

## The Mining Market: Prices of Metals, Ores, &amp;c.

METAL MARKET—LONDON, FEB. 2, 1883.

| IRON.                    | £ s. d. | TIN.                         | £ s. d. |
|--------------------------|---------|------------------------------|---------|
| Pig, G.M.B., Clyde...    | 2 7 8   | English, ingot, f.o.b...     | 96 0 0  |
| " Scotch, all No. 1...   | 2 8 6   | " bars " "                   | 97 0 0  |
| " Welsh, f.o.b. Wales... | 5 12 6  | " refined " "                | 98 0 0  |
| " in London...           | 8 2 6   | Australian " "               | 92 0 0  |
| " in Tyne or Tees...     | 7 0 0   | Swedish " "                  | 92 0 0  |
| " Stafford...            | 5 15 0  | Swedish, London...           | 9 0 0   |
| " in Tyne or Tees...     | 7 0 0   | Halls, Welsh, at works...    | 5 12 6  |
| " Swedish, London...     | 9 0 0   | Sheets, Staff., in London... | 8 10 0  |
| " Swedish, London...     | 9 0 0   | Plates, ship, in London...   | 8 10 0  |
| " Swedish, London...     | 9 0 0   | Hoops, Staff., in London...  | 7 10 0  |
| " Swedish, London...     | 9 0 0   | Nail rods, Staff., in Lon... | 7 0 0   |
| " Swedish, London...     | 9 0 0   | STEEL.                       |         |
| " Swedish, London...     | 9 0 0   | English spring...            | 12 0 0  |
| " Swedish, London...     | 9 0 0   | " cast...                    | 10 0 0  |
| " Swedish, London...     | 9 0 0   | Swedish, keg...              | 15 0 0  |
| " Swedish, London...     | 9 0 0   | " keg, ham...                | 15 0 0  |
| " Swedish, London...     | 9 0 0   | Rails at works...            | 4 15 0  |
| " Swedish, London...     | 9 0 0   | " Light, at works...         | 6 15 0  |
| " Swedish, London...     | 9 0 0   | LEAD.                        |         |
| " Swedish, London...     | 9 0 0   | English, pig, common...      | 13 10 0 |
| " Swedish, London...     | 9 0 0   | " " L.B. " "                 | 13 15 0 |
| " Swedish, London...     | 9 0 0   | " " W.B. " "                 | 14 0 0  |
| " Swedish, London...     | 9 0 0   | " sheet and bar...           | 9 0 0   |
| " Swedish, London...     | 9 0 0   | " pipe...                    | 14 17 6 |
| " Swedish, London...     | 9 0 0   | " red...                     | 16 0 0  |
| " Swedish, London...     | 9 0 0   | " white...                   | 18 0 0  |
| " Swedish, London...     | 9 0 0   | " patent shot...             | 15 15 0 |
| " Swedish, London...     | 9 0 0   | Spanish...                   | 13 2 6  |
| " Swedish, London...     | 9 0 0   | NICKEL.                      |         |
| " Swedish, London...     | 9 0 0   | Metal per cwt...             | —       |
| " Swedish, London...     | 9 0 0   | Ore 10 per cent. per ton...  | —       |
| " Swedish, London...     | 9 0 0   | Silesian, ordinary brands... | 15 10 0 |
| " Swedish, London...     | 9 0 0   | " special brands...          | 15 10 0 |
| " Swedish, London...     | 9 0 0   | English Swansea...           | 17 0 0  |
| " Swedish, London...     | 9 0 0   | Sheet zinc...                | 19 15 0 |

\* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; 12 6s. per box more than 10 quoted above, and add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

REMARKS.—The Metal Market continues in a more or less unsatisfactory condition, and the little better tone which followed the fall in the Bank rate last week has not been maintained, and as business has remained of a purely hand-to-mouth character prices have generally assumed an easy tendency. In addition to numerous other unfavourable features in the markets at the present time it is disappointing to find that the returns for the first four weeks of the current year show an increase compared with the same time of last year in the total failures in the iron and steel trade, and also amongst merchants, brokers, and agents, a feature which may lead to destroy confidence and also check the progress of trade; but on the other hand it is satisfactory to note a good reduction in the failures in the hardware and metal trades. In his speech at Colchester last Tuesday Lord Carnarvon remarked that "it was a serious sight to witness the revenue falling; to see trade so inelastic as it was, to see our exports falling off, to know that the demand which was likely to come from America would be less this year than it had been, and to see that trade was decreasing except in one single case of shipbuilding on the Clyde." That the state of trade just now—and we speak more particularly of the metal trade—is inanimate cannot be opened to question. It is temporarily dull, but we are not prepared to say it is decreasing, and that only one single branch is improving. The shipbuilding trade does indeed form an exception, but only from its being brisk whilst other trades are depressed of general animation; and if reference be made to the labour market it will be found that the actual state of the trade is not after all so very inactive. For instance, we hear from Barnsley that the output of rails is large, and rolled iron is very good. At Birmingham there is a good deal doing in bridge and girder iron, whilst a similar report comes from Darlington. At Sheffield, on the contrary, there is a scarcity of orders, and all trades there are reported quiet; while at Newcastle a steady business is doing. At Wolverhampton some symptoms of improvement are reported; but at Leeds again there is great quietude. It will therefore be seen that although in certain localities there is a slackness in trade, there are others where a fair amount of activity prevails.

Notwithstanding the present comparative inactivity, it is a generally established fact that the requirements of the trade are growing and expanding, and therefore, it is difficult to fall in with the idea that trade is decreasing. It is true that profits may not be as large as heretofore, but this arises chiefly from the keen competition, and the spread of orders over so many sellers instead of being limited to a selected few, as in years gone by. We are also inclined to question Lord Carnarvon's remark about the almost certainty of a reduced American demand this year, as it is true that that country as time progresses becomes better able to supply her own wants, but yet when the large harvests recently reaped there are taken into consideration, when the vast strides in the opening up of the country is remembered, when the construction and extension of railways there is thought of, and when numerous other events which create a development in trade are not forgotten, there certainly does seem a fair chance of a good export trade to America later on in the season, or at all events, it seems rather risky, bearing these circumstances in mind, to state for a surety that the American demand this year will be less than it has been. The view which we have so frequently expressed seems still to stand good, that it will require time for trade to recover from its state of lethargy, but the probabilities are that hereafter the present inanimation will be followed by considerable briskness.

COPPER.—This market has remained extremely dull, and very little business has been carried through, whilst prices have continued to tend in favour of buyers. Orders for shipment are scarce; in fact, for the moment there appears to be almost a total absence of business, and smelters in consequence have been easy in their quotations. This slackness in regular trade has also produced an injurious influence upon the speculative enquiry, and operators have shown great reluctance in making purchases, and the reduced rates quoted for Chili bars seem in no way to stimulate the demand. For the first two days of the week there was a retrogressive tendency in prices, but no serious reduction was made, holders merely accepting about 2s. 6d. reduction upon previous rates, but on Wednesday, when the Chili charters for the last half of January were announced as 2300 tons, great concessions, to the extent of a further 10s. to 12s. 6d., were made, but without finding many buyers at the lower rates. The charters consisted of 650 tons of bars and ingots, and 650 tons of furnace material for England, and 1000 tons of bars for the Continent. It has yet to be seen whether the little scare which these heavy charters has caused will be followed by any further serious drop, or whether it may arise merely from a pressure of sales amongst weak holders, and a recovery in prices soon took place again. Both the imports and deliveries of Chili produce for the latter half of January compare well with those for the same time of last year, being 520 tons and 931 tons, against 833 tons and 812 tons respectively, and which reduces the stock in first and second hands in Liverpool and Swansea by 411 tons, amounting on the 31st ult. to 25,377 tons, against 25,748 tons on the 31st ult. The imports of other kinds of copper during the past fortnight have been 824 tons, and the deliveries 657 tons. The total visible stock during January increased from 47,553 tons to 47,421 tons.

IRON.—There is not much business doing in this metal, but prices, taken on the whole, remain fairly steady. Manufacturers are by no means disposed to make any great concessions in their prices; in fact, they remain firm as a rule, unless very tempting specifications are offered, although some list houses have reduced their price 10s. per ton. There is rather more enquiry for common iron for India, but limits being generally low, only a few transactions have proved practicable. The advice from the manufacturing centres are not altogether satisfactory, as they show that in many places there is a good deal of inactivity, but at others there is still a fair amount of regularity in employment. It is a good sign to see that there is rather more enquiry springing up; and although still for the most part at somewhat impracticable limits, yet it shows that consumers' private stocks

must be diminishing, and that probably ere long they will have to come into the market again. It is this which in great measure gives support to prices, especially amongst those manufacturers who hold enough orders to keep their mills in constant employment for the time being. The market is minus any speculative demand, which necessarily gives it a very inanimate appearance, and thus, perhaps, makes the trade appear more gloomy than what it really is. It being only in some districts where marked quietude prevails, it does not follow that prices are likely to recede, and buyers would probably do well not to keep back their orders for reduced rates, as by delay they may find that prices will go the other way, which would doubtless be to their tendency if present enquiries should actively turn into business. The following advices from America and the home districts testify that trade in some parts is fairly active, and in others it remains almost stagnant.

The cable report from New York of the 26th ult. show that most descriptions of pig-iron are still firm, although the demand still keeps poor. In Scotch pigs there is no change, but Cleveland pigs have advanced 81, while scrap and old rails have been reduced in value. There is hardly any perceptible change in the state of trade in Wales. Orders are said to flow in satisfactorily, and most of the works appear to be fully employed. The Wolverhampton market, at the commencement of the week, was unsettled, owing to the expectation that list houses were about to reduce their price, which anticipation was realised yesterday, when some marked bars were quoted down 10s. This has had a similar effect upon sheets and plates rolled by the list houses, and which have also fallen to the same extent, and has also produced a weakening influence upon quotations for other descriptions. The reduction in marked bars has rather unsettled the market at Birmingham, and the general quotations now for list iron is 71. 10s. Commoner qualities are also lower, while sheets are offering at 71. 10s. to 82. for singles, at which there have been some transactions recorded.

It is anticipated in some quarters that, owing to the reduction in the price of iron, coal and wages must also be soon reduced. Orders at Sheffield do not come to hand very plentifully for merchant iron. Derbyshire and Lancashire pigs are offering at 45s. to 46s. for No. 3, and forged qualities at 44s. 6d. to 45s. Hematites are to be had at 62s. to 63s. 6d. per ton. The report from Middlesbrough is not at all satisfactory, as it states the market there is not only void of all animation, but is also duller and more inactive than it has been for a long time past. The tone is not so satisfactory, and prices are 3d. per ton lower, merchants' quotations now being 42s. 3d., with buyers at 42s.; while makers' prices are 42s. 6d. to 43s. Shipments remain small, those last week being 9600 tons, and which makes the total for the month about 53,000 tons. There is very little doing in warrants, which rule at 42s., while the public stock has been reduced by a further 1800 tons, and now amounts to 90,446 tons. There is a dull demand for manufactured, and the present quotations are 57. 7s. 6d. for ship plates, 57. 17s. 6d. to 61. for bars, and 57. 15s. for angles. Advances from Scotland show that the imports of Middlesbrough pig iron into Grangemouth last week were 3460 tons against 7164 tons for the same week of last year, or a decrease of 3704 tons, and which leaves a total decrease for the whole of this year compared with last of 5023 tons.

There is one extra furnace in blast, the total now being 107, but the public stock has been further reduced by 2107 tons, and now amounts to only 601,356 tons, against 603,423 tons last week. The shipments last week were 473 tons, against 8041 tons for the corresponding week of last year, or an increase of 747 tons, and which makes the total shipments for the whole of this year 42,410 tons, against 34,548 tons for the same time last year, and 36,601 tons for the similar period of 1881. In makers' iron there is no change to report, while the Glasgow warrant market opened on Monday at 47s. 10s. 6d., and business was done down to 47s. 9d., and on Tuesday the price fell away a further 1d. per ton. On Wednesday there was a steady market, but prices were further reduced, business being done between 47s. 5s. 6d. and 47s. 6s. 6d., and yesterday there was rather a firmer tone, but prices did not undergo much change, ranging between 47s. 4s. 6d. and 47s. 6d., while the closing figure to-day is 47s. 8d. per ton.

TIN.—The transactions that have taken place in this metal during the past week have been chiefly for the fall, and prices have continued to recede from day to day, the tone at all times being extremely flat. The principal events of the week are the public sales at Rotterdam and the publication of the monthly statistics for January.

On Tuesday last there were 18,700 slabs Banca sold at an average of 56s. 5d., which is said to be equal to 94s. 5s. per ton, and also 3700 slabs Billiton at an average of 59s. 10s. 6d., equal to about 93s. 10s. per ton. Notwithstanding these appear fairly good prices, considering the present state of the market, it has not encouraged buyers to purchase, and the slight advance in prices at New York has likewise failed to produce any beneficial effect. This may perhaps arise in some measure from statistics being less satisfactory than could be desired. For instance, the total visible stock here and in America has been increased by 489 tons, and which on Jan. 31 amounted to 16,083 tons, against 15,574 tons at the end of the previous month. The deliveries in London and Holland last month were 1582 tons, against 1544 tons in December and 2064 tons in January last year. The shipments from Straits to London last month were 850 tons, and from Australia 635 tons; from London and Holland to America 406 tons, and from Straits and Australia 700 tons. The stock of Banca in trading company's hands is estimated at 2435 tons.

SPELTER is again easier, and ordinaries are quoted at 15s. 10s. to 16s., and specials at 15s. 15s. to 16s. 5s. per ton.

LEAD.—Very little business is doing, and prices are again lower at 13s. 2s. 6d. for Spanish, and 13s. 10s. for English.

STEEL.—There is a steady business doing in rails, and some other descriptions at unchanged prices.

TIN-PLATES.—The demand keeps extremely dull, and common cokes can be bought as low as 16s. from second hands.

QUICKSILVER is steady, without change in price.

Although rather short business has been transacted in the MINING SHARE MARKET this week, it is still without much animation, and prices, with very few exceptions, remain entirely nominal. The mines dealt in have included Gunnislake (Clitters), South Penstruthal, Old Gunnislake, Langford, Wheal Crebor, West Crebor, New West Caradon, Prince of Wales, Herodsfoot, Devon Friendship, Bratsberg, and a few others.

TIN has been rather dull, but no alteration made in the standards for ore since the 25th ult. Tin shares are scarcely dealt in at all, and quotations are generally lower. Blue Hills are quoted 15s. to 20s.; Carn Brea, 7 to 7½; Cook's Kitchen, 33 to 35. Dolcoaths have fallen 5s. per share, and leave off 59 to 60, owing to a report that the lord may demand a large fine for a renewal of the lease, which has only five years to run. The amount of this fine is variously estimated in Cornwall at 30,000l. to 50,000l. It is to be hoped, however, that the rumour is untrue, though great publicity has been given to it, for it would be a great blow and discouragement to Cornish mining. The dues paid to the lord at present amount to about 9000l. a year. East Blue Hills, 7s. to 9s.; the lode in the 50 east is improving. East Pool have been weaker, at 48 to 49. Killifreth, 2½ to 3½; New Kitty, 2 to 2½; North Blue Hills, 2s. to 3s.; South Condurrow, 9 to 9½; South Frances, 7 to 8; Tincroft has declined to 6½, 6½; West Basset, 6 to 6½; West Frances, 6 to 7; West Pevor, 5 to 6; Wheal Agar, 16½ to 17; Wheal Basset, 7½ to 8; Wheal Grenville, 6½ to 7½; Wheal Kitty (St. Agnes), 1 to 1½; Wheal Pevor, 3½ to 4; Wheal Uny, 4½ to 5; Kit Hill, 5s. to 7s. 6d.; Drakevalley, 5s. to 7s. 6d.; Mounts Bay, ½ to ¾; Tresavean, ½ to ¾; Goodever, 1 to 1½; North Penstruthal, ½ to ¾; Phoenix, 2½ to 3; West Kitty, 10½ to 11½. West Godolphin, 1½ to 1½; the 80 east, on the caunter lode, is worth 20l. per fathom.

COPPER has been decidedly weaker, but the standards for ore at the Cornish Ticketing on Thursday remained stationary; average standard, 97. 14s.; produce 7. Bedford United, 1½ to 1½; Devon Great Consols, 5½ to 5½; Devon Great United, 5s. to 7s. 6d.; Gunnislake (Clitters), 2½ to 2½; East Caradon, 1 to 1½; Langford, 9s. to 11s.; Marke Valley, 15s. to 20s.; New Cook's Kitchen, 5½ to 5½; New West Caradon, 7s. 6d. to 10s.; New Caradon, 6s. to 8s.; Parys Copper, ½ to ¾; Prince of Wales, 6s. to 8s.; the bottom level here is looking better. South Caradon, 2½ to 3½; South Devon United, 10s. to 12s. 6d.; West Devon, 5s. to 10s.; West Seton, 15 to 17; West Crebor, 7s. 6d. to 10s. The lode here continues worth 12l. per fathom. Wheal Crebor, 2 to 2½; the sampling here is 413 tons of ore of the average produce of 6½ per cent., and is estimated to produce over 1400l.

Mellaneur, 3½ to 4; the sampling here, 513 tons, realised on Thursday 1597l. West Tolgus, 13 to 15; the sale here, 181 tons, brought 1315l. West Caradon, 20s. to 25s.; the ore computed at 145 tons and sold for 961l. 18s. 6d., weighed off 154 tons 15 cwt., and realised 1027l. 16s. 2d. South Penstruthal, ½ to ¾; in the flat-rod shaft sinking below the 130 level branches of capel and quartz are dropping into the lode, containing rich stones of yellow copper, and the prospects here are very encouraging. Devon Friendship, 5s. 6d. to 6s. 6d.; the agents report that the different points throughout the mine are looking well. Stridridge, 4s. to 5s.; the slopes in the 30 are still good, and the fire in the burning-house is expected to be lighted this week. Russell United, ½ to ¾.

LEAD mines are particularly quiet, and quotations merely nominal. Vans are quoted 5½ to 6½; Great Laxey, 17½ to 18½; Roman Gravel, 8½ to 9½. Tankerville Consols, 5s. to 6s.; at Pennerley a shaft is begun below the 80 west, on Warm Water lode, on a course of lead ore worth 8 tons per fathom, and the slope in back is valued at 5 tons. They sell 140 tons of lead ore next week. South Darren, 10s. to 15s.; the 120 east is worth 2 tons of silver-lead ore per fathom. There are 45 tons of ore for sale on the 9th. Goddard's Lead, 1½ to 1½; Gorsewood, 2 to 2½; Herodsfoot, ¾ to ¾; Leadhills, 2½ to 3; West Lisburne, 4½ to 5; Aberdona, 1 to 1½; Pennant, 4½ to 5; Sinclair, 1 to 1½; West Holway, 1 to 1½; Pen-y-Orsedd, 1 to 1½; Gwern-y-Mynydd, 1 to 1½; East Rose, 1 to 1½; Old Shepherds, ¾ to ¾.

FOREIGN MINES.—Akankoo, ¾ to ¾; Alamillos, 1½ to 1½; Almaden and Tiritio, 11-16 to 13-16; Anglo-African Diamond, 2½ to 2½; Bilbao Iron Ore, 5 to 5½; Birdseye, 1½ to 1½; Bratsberg, 1½ to 2½; Broadway, ½ to ¾; Canadian Copper and Sulphur, ½ to 1½; Callao Bis, 1½ to 1½; Cape Copper, 53 to 55; Cape of Good Hope Diamond, 1 to 1½; Central Jagersfontein, 1 to 1½; Chile, ¾ to 1; Colorado United, 1½ to 2½; Cootacovil, ½ to ¾; Copiapo, 3½ to 4; Devala Central, ½ to ¾; Devala Moya, ½ to ¾. English and Australian Copper, 1½ to 1½; a dividend of 2s. per share will be recommended on Feb. 22, carrying 10 per cent. to the reserve fund, the available balance being 9157l. Fortuna, 3 to 3½; Frontino, 2½ to 2½; General Mining, 5½ to 6; Indian Consolidated, 5-16 to 7-16; Indian Glenrock, 9-16 to 11-16; Indian Phoenix, 9-16 to 11-16; Indian Trevelyan, 5-16 to 7-16; Kapanga, ¾ to ¾; Kimberley North Block, 6½ to 6½; La Plata, ¾ to 1; Linares, 3 to 3½; Mason and Barry, to bearer, 15½ to 16; Marbella, 6½ to 7; Mysore, ¾ to ¾.

New Emma, 1½ to 1½; New Quebrada, 4½ to 4½; ditto debentures, 93 to 98; Nouveau Monde, ½ to ¾; Organos, 2½ to 2½; Orita, 1½ to 1½. Panulicillo, 6½ to 7; the profits in Chili to Dec. 31 were 20,500l., and the net profit for the year, after providing for debenture interest, directors' fees, and London charges, will be 36,150l. After deducting the interim dividend paid in October last there will be 22,600l. available for dividend and reserve in April. Potosi, ¾ to ¾; Rhodes Reef, ¾ to ¾; Richmond, 7 to 7½, and much business doing; on Tuesday the directors declared a dividend of 5s. per share, free of income tax, payable on and after Wednesday next. The official remarks accompanying the declaration of the dividend are very encouraging; exploratory works are in progress at 23 different places. Ruby and Dunderberg, 1 to 1½; Scottish Australian, 2 to 2½; Sierra Buttes, 1½ to 1½; ditto Plumas Eureka, 1½ to 1½; South-East Wynaad, ¾ to ¾; Tambracherry, ¾ to ¾; Tharsis, 3½ to 3½; Tolima, 7 to 9; the profit for November (erroneously credited to Orita last week) was 5092l. United Mexican, 3 to 3½; Wentworth, ¾ to ¾; Wynaad Perseverance, ¾ to ¾; Ruby, 1½ to 1½; Gold Hill, 1 to 1½; St. John del Rey, 140 to 160; Victoria Gold, 1½ to 1½; Michipicoten, ¾ to ¾; Yuba, par to ½ prem.; Placerville, ¾ to ¾.

The Market for Mine Shares on the Stock Exchange has been very inanimate during the week, but the little business that has been done has been at about last week's prices, which is satisfactory, considering that copper, tin, and lead have all heavily declined. A Cornish correspondent writes that Herodsfoot Mine is likely to resume its former position in the Dividend List from its improved appearance at the bottom levels, which are rich for silver. The ore about to be sampled will, no doubt, fetch a high price, as some of it from the deeper levels which has been assayed produced from 73½ to 110 oz. of silver to the ton of ore. Since noon to-day there has been a decidedly better feeling in the general market in which mines have largely participated, the tone at the close being decidedly good. To-day's transactions include Cape Copper at 54½, Chili at ¾, Cootacovil at ¾, Devala Moya at 9-16 and ¾, Eberhardt at ¾, Frontino at 2 11-16, Indian Glenrock at ¾, Indian Phoenix at 9-16 and ¾, Indian Trevelyan at ¾, Mason and Barry at 15½, Mysore Gold at ¾, New Emma at 1½ and 1½, Potosi at 9-16 and ¾, Richmond at 7 3-16 up to 7½, closing firm; Rio Tinto up to 101 for bonds, and up to 22 for shares, both to bearer; South-East Wynaad, 11-16; Tambracherry, ¾; United Mexicans were freely dealt in between 3 and 3½; and Tocopilla were done at ¾. This indicates that a decided improvement is setting in.

Our usual telegram from Cornwall this evening says:—During the past week the Cornish mine share market has been dull, and shares are weaker. The principal event of the week has been the revival of the lease scare in connection with Dolcoath, the rumour being that a heavy sum would have to be paid for a renewal of the lease. It is hoped that the committee will be able to confer with the adventurers shortly. But it may be mentioned that the report requires confirmation, and that the present lease does not expire for five years. At Redruth yesterday 778 tons of copper ore realised 3181l., the standard advancing 8s. Carn Brea, 7 to 7½; Cook's Kitchen, 34 to 35; Dolcoath, 60 to 60½; East Pool, 49 to 49½; Killifreth, 3 to 3½; New Cook's Kitchen, 5½ to 6; Condurrow, 9 to 9½; Crofty, 10 to 10½; South Frances, 7 to 7½; South Tolcarne, 4 to 5; Tincroft, 6 to 6½; West Kitty, 10½ to 11½; Agar, 16½ to 16½; Wheal Basset, 7½ to 8; Wheal Prussia, 1 to 1½; East Uny, ¾ to 1; Wheal Uny, 4½ to 5.

The Electro-Amalgamator Company have arranged to show their process in regular operation from Tuesday next. The report of the statutory meeting and detailed reference to the invention will be found in another column. It appears that since the meeting the directors have received the results of some washing of ore from perhaps the richest gold mine in the world, the quartz from which shows by assay 44 ozs. gold to the ton; but, owing to the refractory nature of the ore, sufficient gold in paying quantities has not yet been obtained. Mr. Fred. Claudet assay shows that Barker's process has extracted 38 ozs. gold out of the 44, or about 130l. per ton.

The Montana Company has appointed Mr. Geo. Attwood, F.G.S., A.M.I.C.E., as resident manager of the company's mines. It is understood that he will proceed to the United States without delay. Devon Great Consols, 5½ to 6; in the 100, west of the engine-shaft, at Watson's, the lode is 5 ft. wide, producing stones of copper and mudiore, and some good quality ores have been broken from the 20, east of the western shaft. The quantity of copper ore for sale on the 22nd inst. is 928 tons, of a much better quality than that of the previous month.

Devon Great United, ½ to ¾; the various points of operations present much the same appearance as at date of last report. The machinery is in good order, and working well. Drakevalley, 5 to 5½; good progress is being made in driving the deep adit level west of engine-shaft by rock drills. The lode east of Matthew's shaft is worth from 10l. to 12l. per fathom. As will be seen by the manager's report, he expects by next week to have 30 tons of black tin in stock.

East Botallack, 1 to 1½; it is stated that the shareholders are likely to be soon rewarded for their patience, since the recent discovery in the Balleswidden portion of the property appears to be a valuable one, and will be developed with all speed. It is added that if this discovery holds good in depth, which appears probable the returns may equal those from the old Balleswidden mine, into which this new lode dips, and which gave dividends to the extent of 80,000l.

East Wheal Rose, 1 to 1½; a very firm market is reported, buyers preponderating. Present firm appearance of market is regarded as showing every indication of a further important rise, as it is generally understood that several large options for the fall are uncovered.

Herodsfoot, ¾ to ¾; the improvement here in the 160 fm. level north is of great importance; the lode is worth 110 ozs. of silver to the ton, and is in new ground. Kit Hill, ¾ to ¾; in the 48 fm. levels east and west the lode is 4 ft. wide, producing some good quality tin ore. The lode in the 24 fm. level, west of the north shaft, is 5 ft. wide, also yielding good stones of tin ore. The main tunnel has been driven during past week about 9 ft.

Mona Consols Copper, 1 to 1½; the reports from this are favourable; some fine rocks of ore have been broken in the plat, and the lode is over 2 ft. wide, accompanied by a fine flock and a beautiful blue kilaas congeal to copper. The mine is looking well, and preparations are being made to send to market the copper at surface. There is also strong evidence of coming upon china clay.

Mount's Bay shares have advanced 5s. on the cutting of the branch lode at Pembro. Numerous dealings in the advance are reported, and the market closes decidedly strong. Mount Carbis, 2½ to 3½; the great flat lode so productive in the mines west of this sett will, it is said, soon be reached by a cross-out at the bottom level. Experts favour the opinion of meeting with a rich lode, adding further value to this great tin-bearing run.

Old Shepherds shares have advanced 1-16th, 15-16ths to 1-16th; there has been considerable activity reported in them during the past week, which from present appearances should, it is thought, cause a still further rise.



Phoenix United, 2½ to 3; the tin sold on Jan. 22 (about 45 tons) realised 54½. 15s. per ton; it is reported that the mine continues to improve, and open up large reserves of tin ground; in fact, to use a miner's phrase, they are looking splendid. The 60 end west is worth 25s. per fathom for 6 ft., and another 6 ft. being blasted down by stopers is worth a similar amount. The 40 west, which was poor at the meeting, is improved, and worth 12s. per fathom. One stope in the back of the 40 west is improved, and worth 45s. per fathom. There were 47 tons of tin sold for four weeks and two days at 54½. 15s. per ton, which month included Christmas.

South Devon United, ½ to 1; the lode in the 110, east of Brook shaft, presents an improved appearance, and east of the cross-course it is fully 4 ft. wide, with a value of 18s. per fathom, and from its present appearance it should lead to a valuable discovery. The winze sinking in the bottom of the 100 fm. level, east of Brook shaft, is worth for length of winze (9 ft.) fully 30s. per fathom. The portion of the lode carrying at Pickstone's is 5 ft. wide, and is composed chiefly of fluor spar, with a little copper ore, and will doubtless lead to a good discovery. The several other points of operation are also looking well.

South Frances, 7½ to 8; the mine managers hope now that the mine is again in fork, and recent improvements have enabled the water to be more effectually controlled, to be in a position to develop the tin ground at the bottom of the shaft.

Tresavean, ½ to 1; there is reported to have been more enquiry for these shares, and that being well held any buying causes an advance. The tendency is regarded as decidedly favourable.

English and Australian Copper, 1½ to 1½; the report prepared for the meeting on Feb. 22 will show an available balance of 9157½. 9s. 6d., out of which the directors will recommend a dividend of 2s. per share, and an addition of 10 per cent. to the reserve fund.

Richmond, 7 to 7½; the directors at their meeting on Tuesday declared a dividend of 5s. per share, free of income tax, payable on and after Feb. 7, and in announcing the fact to the shareholders they state that since the last report the explorations in the mine have been energetically carried on—low grade ore has been found in several places, and some good ore, but no large bodies. The limestone gives favourable indications for ore in many places, which are being followed up, exploratory works being in progress at no less than 23 different places. A new level has been started at a depth of 100 ft., to explore the large extent of promising ground above the 200 ft. level. One small furnace has been running continuously, smelting on an average 320 tons of ore per week, and producing bullion of an average weekly value of \$12,000. Another furnace was started on Jan. 15, to run in connection with the refinery, reducing drosses and low grade ores; the product of this furnace is not included in the published returns. The yearly accounts will be made up to Feb. 23 as usual, and issued to the shareholders as soon after that date as possible. The usual telegram from the mines states that the week's run was \$12,000 from 325 tons of ore with No. 4 furnace. During the week the refinery produced dross to the value of \$10,000. The superintendent's weekly report of prospecting and deadwork (Jan. 8), states that the 800 winze from north-west drift from south-west drift has been sunk 4 ft. Total 16 ft. In limestone and ledge matter, commenced drifting. The 500 north-west drift from north-east drift from east drift from station has been run 16 ft. Total 182 ft. In favourable limestone. The 900 north-west drift from north drift has been run 14 ft. Total 105 ft. In hard favourable limestone. The 150 north-west drift from station has been extended 14 ft. Total 360 ft. In favourable limestone. The 1050 north-east drift from north west has been run 13 ft. Total 89 ft. In crushed limestone.

Ruby and Dunderberg, 1½ to 1½; the weekly report advises continued development of the ore body at the Home Ticket Mine. In the drift from the bottom of the shaft it has been followed 25 ft., with an average width of 8 ft. in the drift above the ore body was only about 2½ ft. wide. The shipments of ore for the week were 71 tons, and there were besides 30 tons at the mines ready for shipment. It is also stated that the quality of the ore is improving.

Colorado United have been largely dealt in to-day at rising prices, but this evening there is a rumour current that Hamilton's telegram does not mean that he has remitted 1000s., but that he requires a remittance of 1000s. to carry on the mines; and it is added that the stating of the amount in sterling instead of dollars favours this view.

Colorado United, 2 to 2½; advices from these mines (Jan. 31) report that connection has been made by means of a winze from the 12th to the 13th levels, "thus blocking out a fine piece of reserve ground of 338½ fathoms." "No. 2 stope, in the 12th level, is looking better than when last reported; the vein of mineral is on an average 6 in. in width, and varies but slightly through the entire length of the stope." There are two other stopes at work in this level, each 200 ft. long, and carrying from 3 to 5 in. of mineral, which will give a good return, particularly as No. 3 stope is reported as showing 5 in. solid mineral. The Upper Onida and other mines worked by the same company also appear to be producing a fair quantity of ore of high grade. It is, therefore, not surprising that the manager should cable 1000s. on account of the profits of the same, but his arrival at the present moment is deemed rather significant, particularly as an agitation of an important character has been set on foot to remove those now in office. It is understood that Messrs. Rickard Brothers have written to Mr. Smyth, stating that they are willing to accept the management of the property, and should they prove as successful as they were in the case of the Richmond Mine, the management of which was accepted under somewhat similar circumstances, there will be little doubt but that the shareholders will remain the debtors to those who have initiated the present agitation.

California Gold (Colorado), 1 to 1½-16th; the week's mill run, as reported by telegram yesterday, was 273 tons; net proceeds, 760s. This is the largest sum realised in any one week from mill runs during the 22 weeks that the mill has been in operation.

Kohinoor and Donaldson, 1½ to 1½; advices considered favourable continue to be received from the mine, and some satisfactory results have just been forwarded of a test run of milling ore from the Donaldson Mine.

Organos Gold, 2½ to 2½; the report published in last week's Journal is said to have been well received by the shareholders, prices consequently continue firm. The next report will, it is expected, bring advices of the completion of the incline and the whole of the machinery, and that crushing the quartz will have commenced upon a large scale.

Sentein, ½ to ¾; enquiries for these shares are reported to continue brisk. The snow has commenced to melt in the Pyrennes. Operations on an extended scale will, it is believed, be resumed immediately, after which increased monthly profits and returns are expected from the recent fresh discoveries.

In Lead Mine shares there has been practically nothing doing, and there is no quotable change in prices. Roman Gravel, 9 to 9½; the 110 south is in a lode 3 feet to 4 feet wide, worth 2½ to 3 tons per fathom. The stope in the back of the 110 (64 fathoms north of the end) is in a lode 5 feet wide, worth 2 tons per fathom, and with the exception of 2 fathoms stoped all the ground from the new shaft to end, 113 fathoms in length, is in reserve. The managers report that the various other points of operation are of equal value as at last report. The sale of 250 tons of lead ore realised 2266½. 5s.

Tankerville, 5s. to 6s.; the manager reports that he is sinking a shaft below the 80 west on the Warm Water lode in a course of ore worth 8 tons per fathom; the lode now being stoped at back of this level is worth 5 tons per fathoms. The engine-shaft at Bog is 5½ fathoms below the 175, the lode yielding rich stones of lead ore and blende. The several other points are without any material change. The samples of ore for sale next week are as follow:—Tankerville, 40 tons lead ore; Pennerley, 80 tons lead ore; Bog, 20 tons lead ore.

Bwlch, ¾ to 1; the stopes in back of the 30 and 60 fathom levels are looking well, yielding on an average from 16 to 20 cwt. of silver-lead ore per fathom. Another parcel of ore will be sampled this month.

The Flavilla Company (better known as the Chicago Mining Company of Utah) directors are inviting subscriptions to pay off certain debts in Salt Lake City and resume work at the mine. Mr. W. S. Godbe, mining engineer, reports that with the expenditure of 5000s. in erecting concentrating works and in deepening the shaft, there is every probability of the property yet becoming a success.

At the Victorine meeting on Monday, among the special resolutions to be proposed is one "that the draft agreement submitted to this meeting and expressed to be made between the company and its liquidators of the one part, and a proposed new company, to be established with limited liability of the other part, be and the same is hereby approved, and that the said liquidators be, and they are hereby authorised to enter into an agreement with such new company (when incorporated) on the terms of the said draft, and to carry the same into effect." There is believed to be a property which economy and good management would make remunerative.

The City of London Marine Insurance Corporation directors' re-

port, to be presented on Feb. 13, states that the net premiums taken during the year, less returns and re-insurances, amount to 110,126½. 17s. 6d., and the claims settled on that account to 49,109½. 5s. 10d. The amount underwritten was 10,912,451½, of which 9,071,797½ had run off or been re-insured up to the close of the year, leaving 1,840,654½, outstanding at that time. The directors regret their inability to recommend the payment of any dividend for the present. It is well known to everyone conversant with underwriting that the latter part of the year 1881 and the greater part of the year 1882 have been more than usually unfortunate, but the directors do not attribute the losses the company have sustained to any want of caution, a very large proportion of such losses having occurred upon first-class risks, and they see no reason to doubt the correctness of their original opinion that in normal seasons, and with the valuable and extensive connection the company has secured, a favourable result may be anticipated for the immediate future.

The Union Land and Cattle Company directors have instructed their solicitors—Messrs. Neish and Howell—to inform the subscribers that some of the shareholders of the Prairie Cattle Company, of Edinburgh, having objected to Mr. Guthrie Smith and Mr. Duncan Smith remaining on the board of the Union Company, those gentlemen have adopted the almost unprecedented course of resigning their seats. Under these circumstances the board is advised by counsel to withdraw the prospectus from publication, and to return at once all deposits. Cheques were sent out for the returned deposits on Thursday evening.

In the Mynydd Gorddu Lead Mining Company winding-up Vice-Chancellor Bacon's chief clerk has appointed Mr. John Edey, chartered accountant, Queen Victoria-street, to be official liquidator.

The Merchant Banking Company of London directors have resolved to declare a dividend at the rate of 8 per cent. per annum for the half-year ended Dec. 31 (an interim dividend at the same rate having been paid last September), and to carry forward 11,974½. to next account.

At Redruth Ticketing on Thursday 778 tons of ore of 7 average produce, and containing 54 tons 9 cwt. of fine copper were sold for 3181½. 5s., being 47. 2s. per ton of ore, 11s. 8½d. per unit, or 58½. 8s. 6d. per ton of fine copper in the ore, and an average standard of 97½. 14s. Subjoined are the particulars of the two last sales:—

| Date.   | Tons. | Standard. | Produce. | Per ton. | Per unit. | Ore copper. |
|---------|-------|-----------|----------|----------|-----------|-------------|
| Jan. 13 | 2198  | 113       | 2198     | 5        | 11s.      | 257 12 0    |
| Feb. 1  | 778   | 97 14 0   | 778      | 4 2 0    | 11 8½     | 53 8 6      |

Compared with the last sale the standard is stationary. The sales and amount realised were:—Mellaneur, 513 tons for 1597½. 3s. 6d.; West Wheal Tolgus, 181 tons 1315½. 1s. 6d.; New Cook's Kitchen, 84 tons for 269½.

SALE OF VALUABLE MINING PROPERTIES AND PLANT.—It will be seen by our advertising columns that Mr. Herbert H. Fuller is to offer for sale at the Auction Mart, Tokenhouse-yard, E.C., on the 15th inst., several most valuable mining properties, with engines and other machinery, &c. The PANDORA Lead Mine will be offered as a going concern with its extensive plant of machinery, &c. Though the deepest level is only 40 fathoms, there has been sold already about 25,000s. worth of lead and blende, and a large quantity of good ore is laid open. The NORTHERN Lead Mines comprise three distinct properties, one of which alone has yielded in the hands of the present proprietors nearly 22,000s. of lead ore, and there is still a considerable quantity in the ground opened. These mines are bounded on the north, south, east, and west by some of Mr. Beaumont's long celebrated rich properties, in the county of Durham. There is a large plant of machinery, including engines, dressing appliances, &c., the whole comprising a very important and desirable investment. Last year these Northern Mines with their plant were valued as a going concern at nearly 6000s. Now is the time for capitalists to acquire such properties at a great deal less than they have cost or are intrinsically worth, and by holding on with them for a short period, and in the mean time carrying on limited operations, realise immense profits. There must soon be a turn in the long depression in the lead trade, and then we shall see a great and rapid advance in all lead mines, and in the machinery, &c., for carrying them on.

## EAST BOTALLACK.

(DIVIDED INTO 6000 SHARES.)

In order to develop the recent important discovery in this Mine, referred to in this week's Journal, the Committee have determined to offer to the public a few of the Shares still in the hands of the Committee at the price of £1 per Share, all Calls paid up to date.

Application to be made, on or before the 10th inst., to the Purser,

MR. JOHN HOLLOW,  
East Botallack Mine, near St. Just, Cornwall.

SORTBRIDGE.—The clearing of the 40 east has nearly reached the whim-shaft. The stopes in the 30 are still turning out well for tin, and the fire in the burning-house will be lighted to-day.

DEVON FRIENDSHIP.—The agents report that almost every point throughout the mine is looking exceedingly well.

SOUTH DAREN.—The 120 east has improved to 2 tons of rich silver-lead ore per fathom. They will sell 45 tons on the 9th inst.

TANKERVILLE GREAT CONSOLS.—The 232 fathom level east at Tankerville is looking better. At Pennerley six men have begun to sink a shaft under the 80 west on Warm Water lode, worth 8 tons of lead ore per fathom, and a stope in the same level is valued at 5 tons. Several other stopes yield together 6½ tons. The lode in the engine-shaft at Bog is nearly 6 ft. wide and yielding rich stones of lead ore and blende. They have sold this week 70 tons of blende at 47. 5s. per ton (297½. 10s.) and sell next week 140 tons of lead ore.

TRESAVEAN.—It is reported that the new battery of stamps is working well, and that plenty of tinstuff to keep all going night and day is forthcoming. It may now be considered, it is added, that the monthly sales will continue to increase as the extension of dressing-floors proceeds. The quality continues of the same high standard as the parcel of tin just sold.

EAST WHEEL ROSE.—Some splendid specimens of silver-lead ore are now lying at the company's offices, Old Jewry, taken from Innes' East Shepherds' and Middleton's lodes, all appearing to indicate very rich deposits. It is stated that at the deeper levels the ore improves in quality and the lodes in size. Every point throughout this part of the mine is reported to be improving, especially Middleton's lode.

OLD SHEPHERDS.—It is announced that some magnificent samples of silver-lead and copper has just been received from this mine, and an old miner states they are precisely the same in character and equal in every way with West Chiverton, when the shares stood at 80s. each. Judging from the report the recent important discovery continues to maintain its value, and at the 44, 10 fms. below where it was found, there is a splendid lode. The agents appear to be confident of success, and speak of the discovery as being permanent. The only thing now required to enable very large sales to be made monthly is the completion of the steam drawing-engine, and this is reported to be nearly ready for work. It is further reported that the preparation of another parcel of lead for the market is very favourably advancing.

MOUNTS BAY CONSOLS.—There has been considerable enquiry for the shares of this company during the week, in consequence, it is said, of an important find at the Pembro sett. A branch of the lode has been cut rich, which is considered clearly to show that the lode is near, and will be found very valuable when reached. At Trebarvah Mine, according to this week's report, the tribute pitches have been let very advantageously—a sure test of their valuable nature. At Sydney Cove sett the stamps are working well, and the Burning

House is nearing completion. It appears to be now generally considered that the initial difficulties attending undertakings of this magnitude are now surmounted, and that satisfactory results will soon be forthcoming.

WEST CARADON MINE.—In the accounts presented at the general meeting on the 25th ult., the sale of ore on the 18th ult. was computed at 145 tons, realising 961½. 13s. 6d. The ore weighed off 154 tons 15 cwt., and the actual amount of sale was 1027½. 16s. 2d.

## C. PASS AND SON, BRISTOL,

ARE BUYERS OF  
LEAD ASHE SULPHATE OF LEAD, LEAD SLAGS,  
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COPPER, LEAD, AND ANTIMONY.

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Assays or Complete Analyses made of Copper, Silver, Lead, Zinc, Tin, and  
other Ores.  
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GENERAL, CONSULTING, AND MINING ENGINEERS  
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ADVISE ON ALL QUESTIONS OF THE WORKING AND MANAGEMENT  
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Every information relative to the progress of lode-tin mining in the Wild  
River district (termed by geologists "The Cornwall of Australia") can be ob-  
tained by communicating with the undersigned.

CHARLES JENKIN.

"Herberton Advertiser" Office, Herberton, September, 1882.

WANTED a GOOD FOREMAN MINER, with thorough know-  
ledge of quartz mining, stoping, and timbering, to proceed to the  
coast of Africa without delay.

Apply, by letter, to Akankoo Gold Coast Mining Company, 11,  
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State lowest price to JAMES TURNER, Stockdealer, 17, Devon-  
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ALL PERSONS ACQUAINTED with Mr. GEORGE SALTER,  
late of Matales, Sinaloa, Mexico, who owned a Silver Mine in  
that district, are respectfully requested to forward any particulars  
respecting him to JOHN SALTER, Sutton Villa, London Road,  
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RICHMOND CONSOLIDATED MINING COMPANY  
(LIMITED).

Capital £270,000, in 54,000 Shares of £5 each.

THIRTY-FOURTH DIVIDEND.

Amount of Dividends already paid ..... £754,517 10s.

Notice is hereby given, that the Directors of the above Company  
have this day DECLARED a DIVIDEND of FIVE SHILLINGS  
PER SHARE, free of income tax, PAYABLE on and after Wed-  
nesday, the 7th February next, at the Company's Bankers, the Union  
Bank of London (Limited), Princes-street, E.C.

And notice is hereby further given, that the Transfer-books will be  
closed from 2nd to 6th February, both days inclusive.

By order of the Board,

HUBERT AKERS, Secretary.

Offices, 44, Coleman-street, London, E.C., 30th January, 1883.

MINING "E L C A L L A O."  
GUAYANA, VENEZUELA.

COUPONS OF SHARES ..... 322  
Gold in bars produced in the month of December, 1882, and re-  
mitted to Messrs. Baring Brothers and Co., London, 9430 77-100 ozs.  
DIVIDEND distributed for each coupon, \$400.  
(Signed) A. LICCIONI, President.  
(Signed) VICTOR T. GRILLET, Treasurer.

W. TREGAY, MINING ENGINEER, REDRUTH  
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MINING ENGINEERS AND INSPECTORS,  
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Advice as to Working given.

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STOCK AND SHARE BROKERS, REDRUTH.  
ORDERS BY TELEGRAM PROMPTLY EXECUTED.

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PRACTICAL GEOLOGIST AND MINING ENGINEER  
Who has had great experience in the Gold Mines of Brazil, California, and Aus-  
tralia, having recently examined the Gold Fields of the TRANSVAAL, is pre-  
pared to furnish Reliable Reports as to their value.  
All kinds of Mineral Deposits carefully examined and properly estimated.  
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 CROSBY LOCKWOOD AND CO., 7, Stationers' Hall-court, London, E.C.

### Notices to Correspondents

**MARKET PRICES OF SPECTER—"J. L." (Bristol).—**We do not find that the mean prices for 1859 and 1861 were stated in the *Mining Journal* annual reports for those years, but it is remarked that at the close of 1858 it was 231, due chiefly to speculative purchases; by June the quotations had fallen to 187. 10s. to 197, lots purchased at those prices being soon forced on the market for cash, whilst the stocks were very heavy, the year closing at 217. 17s. 6d. to 221, with an unfavourable prospect. As to 1861 prices reached 161, a lower minimum than in any year since 1852, and at the close of the year 1861 it had only recovered to 171. to 175s., with a stock in London of over 5000 tons, and still increasing.

**Received—"J. T." (Birmingham) should apply to a shareholder, who will advise him as to the desirability of the investment he contemplates—"A Shareholder" (Leeds).—"A Shareholder of 1000 Shares" (Collacombe).—"Disaffected" (Driffield).—"T. B." (Dublin).—"F. S."—"N. J. H."—"H. S. R."—"J. N." (La Plata) should have appended his name to his letter; it would then have appeared.**

**PULVERISING SYSTEM.—**Will any correspondent of the *Journal* kindly put the writer in the way of ascertaining the particulars of the new system he has seen described of pulverising ores to an impalpable powder by using opposing currents of air or steam to bring the ores into violent contact.—T. B.

**\*\* The TITLE-PAGE and INDEX to VOLUME LII., for the year 1882, was published in the *Mining Journal* of Jan. 20.**

## THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, FEBRUARY 3, 1883.

### COKE-MAKING, AND THE HYDRO-CARBONS.

We last week drew attention to the improved mode of making coke, by which the gas tar, ammoniacal water, and other valuable products were obtained in the most direct manner by a process recently patented by Mr. JAMESON. As yet, it may be said, the full extent of the nature and value of the hydro-carbons found in the distillation or roasting have not been realised; but already it is known that there are upwards of 60 products derived from the simple element of carbon, hydrogen, oxygen, nitrogen, and sulphur, which constitute the raw coal, and are set at liberty by its destructive distillation. Were only a fourth of these utilised they would more than pay the first cost of the coal, and give the coke into the bargain. But cheap coke appears to be one of the principal matters sought for, seeing that a large quantity of it is used at the chemical works on the Tyne. The patent process has, we are told, been successfully tested at the Felling Chemical Works, belonging to Messrs. PATTERSON, REDMAYNE, WATSON, and PATTERSON, and certainly no better place could have been fixed upon for the purpose, or where the process could be more advantageously applied. The plant consists of four revolving furnaces and five sets of chambers, with the usual accessories. The old pan process is used for decomposing, and the products are soda ash, refining alkali, soda crystals, bi-carbonate of soda, and bleaching powder made by Weldon's and Deacon's processes. Of course, there is a large consumption of coke, and the making of it at a low price would place the manufacturers on the Tyne in a position to compete with those both at home and abroad. Germany is a large producer of sodas, and considerable improvements have been made from time to time for the purpose of cheapening its production, and efforts have been made in that country to introduce the Siemens' regenerators into the manufacture of the soda, especially for the transformation of the chloride into a sulphate. There has also been a modification of the Weldon process in Germany by means of solutions of chloride of magnesium, which are exposed to evaporation, and the residuum treated by steam then yield magnesia and hydrochloric acid. Cheap fuel in our home manufactures of sodas in particular, is a most important item, and by the new process this will evidently be attained. In addition to that, however, there are the other products that can be readily obtained at the chemical works where the coke is made. Not the least important of these is paraffin, which on the Continent is extensively extracted from lignite, and at home from the Boghead and other bituminous shales. In Germany the paraffin, the point of fusion of which is from 30° to 60° Centigrade, is largely exported to England, France, Italy, Austria, &c. Yet there is no reason why we should be dependent upon Germany for any of our supplies, seeing that we have more of the raw material than is necessary to meet all our requirements, and actually export a portion of it for the extraction of the colouring matter.

But the coal itself contains the paraffin, and it can now be obtained by the new process of making coke. When the coal tar is distilled two oils and certain products of a solid character are obtained; naphtha, or light oil, is the first to make its appearance, and then comes what is termed "dead oil," much heavier than water, and then various solids, including paraffin, naphthalene, anthracene, and chrysene. Paraffin is extensively used in the form of candles, and in a liquid state as lamp oil. The liquid form of paraffin can be obtained by distilling the light oil, which contains other things besides. Pure paraffin itself is a soft, light substance, without either smell or taste, and it cannot be acted upon by the most powerful chemical re-agents, such as acids, alkalis, &c. In addition to its use in the making of candles and lamp oil, paraffin is used for various purposes in different trades; in the manufacture of matches it renders the wood more combustible than it would otherwise be; in the sugar trade it takes the place of butter; in the saturation and in the manufacture of toys, dolls, tapers, and similar things it takes the place of wax. At the works in the North of England paraffin, in connection with the make of coke, could be easily obtained and so as to ensure a good profit. Paraffin can also be distilled for illuminating purposes, giving much greater brilliancy than the ordinary lighting gas, whilst the works required to produce gas from paraffin are far less costly than gas works. In addition to the paraffin which is included in the fatty hydrides, there are the chromatic hydrides, and these include benzol, which is considered by far the most important of all the hydro-carbons, and when found by FARADAY was called bi-carbide of hydrogen, being the resulting liquid from the compression of oil gas. It was first obtained from benzoic acid, but more recently MANSFIELD found it to exist in the most volatile parts of coal tar, and it was also found in the same by HOFMAN.

Benzol is obtained by distilling naphtha, and is a very volatile colourless liquid, with an agreeable scent. But its chief value is found in the products which it gives birth to, for when mixed with nitric acid there is formed nitro-benzol, which has a strong odour of bitter almonds, due to the presence of prussic acid. Nitro-benzoline is used for the production of several perfumes and for flavouring confectionery. Then there are the phenol, and other tar acids, in which there is the carbolic acid, which when pure appears in the form of beautiful white, but very deliquescent, crystals. Carbolic acid is the most powerful of disinfectants, for it destroys the activity of the virus acting directly on vitality. In its presence the development of embryonic life is all but impossible, and before its powerful influence all minute forms of animal life are destroyed. Amongst the phenols of the gas tar there is the picric acid, an important antiseptic, and from it has been formed an explosive of great power. In

the coal there is also an interesting series of acids, amongst them the sulphurous acid, which is extensively used for bleaching straw, woollen, and silken fabrics. The above are merely a few of the valuable products that can be obtained from the making of coke, and they show that where they can be economically extracted that the work must be a profitable one. There is, therefore, every reason to believe that with the carrying out of the process patented by Mr. JAMESON some new industries will be brought into existence that will be of great advantage to the North of England and to the country generally. The products of coal are as numerous as they are valuable, and the utilisation of them cannot well fail to repay those who work them with energy, seeing that we have been hitherto obliged to import a good many of them from the Continent.

### ASBESTOS.

Of late years few inventions have made greater progress in a short time than that of the manufacture of asbestos. Its uses are numerous, and of a most varied character. For piston packing the material holds an exceptionally high position, as it does also for the covering of boilers. One of its great recommendations for several purposes is that it is non-combustible, and by its adhesive properties and great tenacity is a good preservative of the metals from rust. We find it in the form of a cement, and also as a fire-proof paint. Seeing the several terrible catastrophes that have taken place by the burning of theatres, hotels, and other large buildings, and the attention that is now being paid in the Metropolis to the safety of the audiences in the theatres, there is no doubt that asbestos can be advantageously introduced for the prevention of fires, or at least not allowing them to extend. This could be effected in many ways, seeing that the asbestos can be made thoroughly fire-proof. In connection with scenery it might be so introduced that a fire would be impossible. Some time since some interesting experiments were made bearing out what we have stated with regard to our theatres, showing that the material was one of the best of preventatives against fire. Some pieces of wood coated with asbestos paint, and some without the paint, were placed on a fire, and the result was that whilst the unpainted wood burnt fiercely, the others were a long while before the fire affected them, and then only to the extent of burning the gases in the wood, for when the blocks were held up there was no fire whatever. After that there were two stages erected, one painted with the asbestos and the other not. These were fired, but whilst the unpainted ones readily caught fire the other was untouched, even when burning shavings were thrown on to it.

The scenes made of canvas, and only covered with the paint, resisted all attempts to set them on fire. Were our theatres to have this material in any form, or even painted, there would be little to fear from a conflagration, which, under existing circumstances, is always to be dreaded. The cost is very moderate, and a cloth of asbestos could be made that would do instead of canvas, and, we believe, could be painted just as easily. The precaution, we understand, has been taken by the Crystal Palace Company, the stage of the theatre at that place having been painted with the asbestos paint. The principal ingredient of the paint, we believe, is the asbestos itself, and, unlike most paints, they are remarkably durable, retaining their appearance for a very long time, and, therefore, in that respect, far superior to ordinary paint. Asbestos, therefore, should be found, in some form or other, in all our theatres and public buildings where there is now inflammable material, so as to lessen the risk of fire, and it may be, loss of life as well. There is given to our theatre managers the means of rendering a fire, especially on the stage, almost impossible, and that without a heavier outlay than they have to make for canvas that easily ignites. With asbestos, or asbestos paint, no fire can take place where either are introduced, for the products are both fire-resisting and acid-resisting as well. There are the advantages of cheapness, in the first instance, durability, permanency, and the still more valuable property of fire-resistance. With so much to be said in favour of the asbestos material, and the paint made from it as well in one form or the other, it should be most extensively patronised, more particularly by the managers of our theatres, who would thus ensure the safety and give greater confidence to the audiences who patronised them.

### LA PLATA MINING AND SMELTING COMPANY.

The English shareholders, and at the present time the great majority of the shares are held in England, are not unnaturally greatly dissatisfied with the result of the last four months' working, and the exhibition of a loss of nearly 6000*l.*, instead of the regular monthly dividend at the rate of 10 or 12 per cent. per annum which but a comparatively short time since they were regularly receiving, and called forth some very strong expressions against all on this side the Atlantic who have any connection with the enterprise. To expect that a stockbroker can do more than judge of the merits of an undertaking from the report of experts engaged in the business which the company carries on is unreasonable, yet it but too often happens that capitalists, judging solely from the price of shares in the market, become overwhelmed in panic when the quotations decline, and sacrifice property which after the temporary depression is passed proves itself more valuable than ever. In the present case, Mr. William Abbott having been the largest dealer in the shares, it is complained that he has not shown his usual celerity in obtaining his Leadville information. Be this as it may, there appears no reason to doubt that he has been prompt in his action for remedying the difficulty into which the concern has fallen, nor that the steps taken will prove inadequate.

The cause of the hitch appears to be the old one of difficulty in transport; both the Denver and the Rio Grande, and the Union Pacific Railroads having acted most unfairly towards their best customers. It was felt that an unfair advantage was being given to Denver, as compared with Leadville, whereupon Mr. Abbott at once put himself in communication with the President of the Denver and Rio Grande line, who has given ample evidence of willingness to have the matter put right. He states that "the policy of our company is the same as formerly—to live and let live—and not to injure the smelting industry of Leadville. I would urge the desirability of the smelting companies taking combined action, if they find it necessary to their interests to do so, and represent to the railway companies that the rates are unjust to them, if they are so. The railway companies can revise existing rates. On first learning of the La Plata Company's complaint I wrote to our general manager for full information in the matter, and I can assure you that your letter will receive every consideration." As all the Leadville concerns and not the La Plata alone are suffering from these differential rates, there need be no fear of the necessary combination at Leadville with a view to lay the matter fairly before the railroad company.

It must be gratifying to the La Plata shareholders to learn that the temporary cessation of profits is in no way attributable to the decline of the company's commercial business, but entirely to outside circumstances of an altogether temporary character. Mr. Thomas Rickard, the company's consulting engineer, replying to an enquiry of Mr. Abbott's as to the real position and prospects of the concern, states that "having repeatedly visited the La Plata property in the summer of last year, I am still as satisfied as to its intrinsic value as I was when I made my first report. The property owned by the La Plata Mining and Smelting Company is decidedly among the best and most productive in Leadville, but the want of money has created the necessity of deferring certain indispensable improvements, both at the mines and at the works. The amount of ore offering would justify increasing by 50 per cent. the rate of smelting hitherto. My statements with respect to the resources of Leadville in furnace material have been fully borne out. . . . There are, however, two circumstances which have created the present difficulty. The first and most serious is that of the granting of differential railway rates to Denver. In order that the effect of this may be clearly understood, it is sufficient to state that the rates favoured Denver to such an extent that smelters in Leadville formerly making good and satisfactory profits have, for some time past, made none whatever. These unfair rates have affected smelters both in receiving the fuel and in the transport of the bullion. The other

difficulty against which the La Plata has had to contend is the high rates charged by the banks for financial accommodation. As the current local rate is about 1 to 1½ per cent. per month, it will easily be seen that the saving of the interest of such costly financing is of itself a very considerable item. . . . In conclusion, nothing is more certain than that smelting at Leadville is a good paying business, provided there is sufficient capital to secure the ore supplies, and to carry on the business on good and proper business principles.

The complete remedy would appear to be very simple—to reconstitute the company as an English undertaking, or form a new English company, as was done in the case of the Richmond, so that the board of direction and superior control might be in London. From the number of shares held in England there would be no difficulty in doing this, and it might be assumed that the result would be a similar permanence and regularity in the declaration of dividends.

### DIVERS AT WORK IN PHENIX UNITED MINES.

During the past few days two divers and an assistant have been engaged in attending to some pitwork under water in Phoenix United Mines. The heavy and almost incessant rains during the winter have so increased the water in these mines that it has risen above the plunger pole, which is situated 200 fms. from the surface. After the plunger had been working some time under water it failed to work satisfactorily. Soon after it was discovered that it required to be packed, and the question arose as to how the obstruction was to be removed, there being several feet of water above the top of the pole. The manager and agents held a consultation, and decided to engage the services of a diver. This course was generally approved in the mines, and on the 19th instant was accordingly adopted. At first one diver and his assistant came on the mines, and prepared themselves to perform a piece of work underground which they had never before seen. They, however, determined to make an attempt in a vigorous manner, knowing that if their efforts were successful, much credit would be reflected on them, as it was the first time any such work by divers had been done in mining operations. Much interest was manifested in their descending the ladders and in their procedure under water which increased from 10 to 20 ft., and without light, it being the first time they were ever under the "sod." They, however, proceeded to the 200 fm. level, where operations were to be performed on Jan. 19. Preparations were in a short time made, and the diver started to do work, the like of which had never been accomplished. Prior to the diver commencing every precaution was observed, and he was informed exactly where to stand. The diver succeeded in packing the pole, and a signal was given to the engine-man to work the engine. It started, and the plunger pole worked in a very satisfactory manner all night, but in the morning the shaft-men ascertained that the pole had failed, and wanted to be attended to again. The diver prepared to pack the pole the second time, and continued to attend to it until Monday, the 22nd inst., when the work was deemed too laborious for one man to continue to do, and the services of a second diver were called in to perform the same kind of work as the former. Up to Jan. 31 the engine continued working as satisfactorily as ever. The divers and apparatus were had from Her Majesty's Dockyard, Devonport, kindly and promptly lent for the occasion by the Admiral-Superintendent.

Mr. Thomas McCulloch, diver, who has been in Her Majesty's service for 16 years, has had the practical execution of the work, he with the other diver and assistant having returned. There is great praise due to Phoenix Mines' agents for their assistance—the names of Capt. Truscott and Capt. Harvey being entitled to special mention. The above successful experiment is a new feature in mining. By adopting this course a considerable expenditure to the company has been prevented.

### DYNAMO-ELECTRIC MACHINES.

An improved method of developing magnetic force in iron magnets, and for turning and directing the lines of force into the field or armature path, has been invented by Mr. JOHN FARQUHARSON, of Fulham. This is effected by building up the magnets of alternate layers of iron and wire; by this means the insulated wire in which the exciting current circulates is brought nearer to the iron, and the loss of force due to the usual distance of the outer layers of wire is thereby saved. He makes the core or central portion of a form suitable for taking two or more layers of wire, its transverse section being circular or any other form suitable for its position in the machine. On this core he places two or more layers of insulated copper wire. Over this another layer of iron, fitting closely, and which may consist of several bars of soft iron, or of one bar of suitable form, open lengthwise to prevent circular currents in the iron; in this manner the electro-magnet is built up; on this two or more layers of insulated wire is placed, covered by a layer of iron as before, the outside and the inside being iron. The armature circuit consists of a narrow ribbon of copper arranged as described hereafter, the object sought being to revolve the whole in a magnetic field of high intensity, and to cut as many lines of force as possible; for this purpose the ribbon is covered on one side with tape or other suitable insulating material; it is then folded backwards and forwards. The folds being of equal length to suit the magnetic field, the whole of the ribbon required is thus formed into a straight bar, closely pressed together, its thickness being the width of the ribbon, and its length being the same as that of the metal ring or armature periphery; this ring has a U-shaped section, one side being movable. The bar of ribbon formed as described is placed on the periphery on its edge, and readily lends itself to the circular form, the folds opening at the outer edge. It is then secured on its inner edge by the movable ring, the insulation of the conducting ring is completed by wedge-shaped pieces of wood or other suitable material, the outer ends of which project slightly beyond the conductor, and take the inward pressure of a band for keeping the ribbon firmly in its seating. When the machine is to be self-exciting a section of the ribbon is separated, the ends being led to a suitable commutator.

### UTILISING BY-PRODUCTS IN THE MANUFACTURE OF COKE.

The present method of making coke in England has been described by Dr. Angus Smith as having all the appearance of roughness which extravagance always produces. Attention has frequently been given to the subject by inventors, and in 1880 a paper was read before the Iron and Steel Institute by Mr. H. Simon, of Manchester, describing a system patented by himself and Mr. Carves, which has since been adopted by Messrs. Pease and Partners, of Darlington, the success of the process having previously been ascertained in France. The firm in question proceeded to build a battery of 25 ovens, which have now been at work for a considerable time. They seem to have done full justice to the invention, and have spared neither trouble nor expense to make it a success. All the figures and statements given by the patentees as to the results obtained in France are said to have been completely confirmed, and in some respects surpassed. It has now been practically proved that the coke obtained in these ovens is excellent, and leaves nothing to be desired as furnace coke. It is of great hardness, and is said to contain less sulphur, the latter circumstance being attributable to the fact that the gas evolved during the process is in this system continually sucked or pumped away, including, of course, a good percentage of sulphur in the form of vapour. The quantity of coke is said to be increased to fully 75 per cent. (after deducting moisture) of the coal charged. This in itself, and comparing it with the ordinarily obtained percentage of from 62 to 65 per cent. of coke, is estimated to be a gain of fully 10 per cent. in coke, or equal to (say) 1s. per ton of coke made. The by-products, in the shape of tar and ammonia water, amount in value to between 5s. and 6s. per ton of coke made, assuming tar to be worth 3d. per gallon, and ammonia water 1d. per gallon.

Each of the coking chambers, built at Crook, at the Messrs. Pease's West Collieries, produced about 1 ton of coke in the 24 hours. The total possible extra profit realised, over and above the previous ordinary profit in coke making, is claimed to be about 1s. for extra quality of coke, and 5s. to 6s. for by-products. Against this should



be set a possible slightly increased expense in the working of the ovens. It is stated that the expenditure under this head amounts to about 1s. 6d. per ton, as against 9d. to 1s. under the old system. It appears that a well-known chemical manufacturer in the North of England who has analysed and used the bar made according to the Simon-Carves' system, at the Messrs. Pease's works, states that its quality is even superior to the best average bar obtained from gas-works. It is admitted that it is possible that the value of the by-products would, by an over-production, be reduced to some extent; but it is urged that as far as tar is concerned, the value has been increasing considerably of late on account of its greater production for the manufacture of aniline dyes. With regard to the ammonia water, it is believed that if the price were to fall a little an almost unlimited enquiry for its use as artificial manure would commence to spring up—the only reason why it is less used at present being that the cost is still somewhat too high.

Within certain limits it is considered to be a drawback to this system that the erection of the coke ovens and appliances is rather expensive; but the patentees state that owing to the increased returns the whole cost of establishment would be refunded by returns of less than two years' working, so that the question cannot be considered of very great importance. The importance of the subject can best be realised by the fact that there are several firms in this country manufacturing somewhere about 10,000 tons of coke per week.

#### ENGLISH DUTIES ON COAL.

The history of the London Coal Dues has been so frequently written and their recommendations and evils so fully discussed that it might almost be thought that little new could be brought forward upon the subject; but Mr. Theo. Wood Bunning, the indefatigable secretary to the Northumberland and Durham Coal Trades, in a pamphlet just issued—*An Account of the Duties on Coal, and the London Coal and Wine Duties*. Newcastle-on-Tyne: Andrew Reid—has shown that there is still plenty to record in order that the history of the tax should be fully understood. Coming, as it does, from a colliery district there need be no fear that the pamphlet exaggerates in any particular, since the result of the abolition of the duty would be to cripple several of the most prosperous industries of the Northern counties—industries which could be more profitably carried on upon the banks of the lower Thames but for the 1s. 1d. protective duty on coal now enjoyed by the manufacturers of the Tyne. But apart from the question of the transfer of established industries, there are other considerations of no less importance. There was probably no tax ever imposed which has been more willingly paid by those upon whom it falls than the London coal tax, and the agitation for its repeal has invariably come from the coalowners, in the hope that by increasing their sea sale they will be the better able to enforce their demands upon the consumers, upon whom they depend for their land sale.

The trade of London being rather commercial than manufacturing those who bear the London coal tax, whilst admitting that its repeal would facilitate the establishment of factories within the London district, urge that there is no necessity for them, and that inasmuch as the whole of the duty is applied to the sanitary and general improvement of the district in which it is levied they receive a very ample equivalent for the payment made. It is well known, moreover, that the removal of the tax would not lessen the price of coal to the poor consumer within the taxed district by a single penny per ton, as is evidenced by the fact that the price of coal to the consumer is actually higher in coast towns, where London taxation is unknown, than in London itself. Nor is the wholesale dealer in such localities more favourably situated. Even at such places as Brighton, Dover, and Folkestone it is usually more profitable to the dealer to buy in London than to import direct from the Tyne, the reason being that in dealing direct there is practically no competition, whilst in dealing at a regular market the price of the moment, and which is fixed by the competition prevailing, there can be taken advantage of. There can be no doubt that immediately on the abolition of the London coal tax many coalowners would be disposed to follow an example which has been already set, and attempt to supply the consumer direct, and that, following the practice adopted in the example alluded to, the extra profit would be divided between the coalowner and his London agent, no portion of the pretended advantage being given to the consumer. Thus a few of the more wealthy coalowners would add to their already ample gains at the expense of those who at present form the London market.

But perhaps the most important consideration, taking the question of the London coal dues as a tax imposed upon themselves by those who pay it is whether the London district has really had full value for the amount expended, and this no one who carefully reads Mr. Bunning's pamphlet can for a moment doubt. He shows carefully and distinctly the various useful purposes for which moneys have been raised and expended on the security of the coal dues, and that in this way upwards of 6,500,000l. has been provided during 20 years without inconvenience to anyone, which would otherwise have had to be raised by onerous direct taxation. Mr. Bunning's pamphlet will certainly be referred to upon the re-discussion of the subject, and a more thoughtful and reliable work of reference need not be desired.

#### THE SILVER DISTRICT OF SPANISH AMERICA.

The history of the gold and silver mines of the New World has always been an interesting subject of study with miners in Europe, and the attractive character of *El Libro del Oro*, the object of which was to prove that Chili has been the richest country in the world for gold, and that it is capable of being made so again by the vigorous exploration of its subterranean auriferous gravels, has caused the author's name to be favourably known to many readers of the *Mining Journal*. He has now completed an equally valuable and interesting volume treating of the argentiferous deposits of Chili and the neighbouring States—*El Libro de la Plata*. Por B. Vicuña Mackenna Santiago de Chile: Cervantes, Calle del Puente—which will well repay attentive study by all having capital embarked in mines of the class referred to. The exhaustive character of the book may be judged of from the circumstance that the 24 chapters into which it is divided fill more than 700 pages, and treats of the whole history of silver mining in the country from the time of the Incas to the present. In treating of the silver mines of the Cordillera Nevada it is pointed out why the age of gold must have preceded in Chili, as in California, that of silver. It appears that the ancients sought silver mines only in the cordillera, and this, as well as the trade of breeding mules for the Potosi, injured the mining industry of Chili. There are good accounts of the Chilean silver mines of the time of Pedro Valdivia; of the first mention of the silver mines of the north; of the Chilean silver mines in the middle of the 18th century; and of the discovery of Huapallata Mines in 1738, and formation of the first mining company with a share capital in Chili. The concessions granted at this time appear to have been somewhat peculiar, although no doubt sufficiently extensive, for the miners were granted all the privileges which the Spanish laws secured to corporations "i, por último, se le atribuía la enorme facultad de no permitir dentro de su jurisdicción que ningún estante ni habitante pudiese salir de ella sin un permiso especial, puesto que la jente minera 'era la mas ociosa i vagabunda de todo el reino.'"

Treating of the first argentiferous productions of Copiapó, it is remarked that it owes its origin to the gold, and not to the silver. The first discoveries of silver in Copiapó were foreigners—the Portuguese, Don Cayetano de Almeida, and the Pole, Borkowski. An entire chapter is devoted to the account of the English in Chili from 1820 to 1825, and there are chapters on Argueros and on Chañarillo. In speaking of the geology and production of the latter district a high compliment is paid to the admirable practical intelligence of the Chilean miners. The chapter on the age of silver in Atacama is a particularly interesting one, as is also that on the life and character of the miners of the North. Treating of the Desert of Atacama and its first explorers, full credit is given to Don Diego de Almeida, Don José Antonio Moreno, and Don José Santos Ossa. Mention is made of the discovery of the Antofagasta and Aguas Blancas deposits, and of Señor Ossa's further explorations of the desert near the foot of the

cordillera with a view to the construction of a railway, his application to construct which was, however, coldly negatived. Caracoles is fully referred to in the 14th chapter, and there is a good account of its mineralogical exploitation in that which succeeds. A chapter is devoted to the silver mines of the central region—from the Cachapoal to the Aconcagua—and it is shown that districts which have been passed by as non-metalliferous are well worth attention. The statistics of the metalliferous riches of Chili in the 19th century show how highly productive the country has been, and the following chapter on the influence of the discovery of silver upon the progress and civilisation of Chili is well considered and exhaustive. In the remaining chapters the silver mines of Bolivia and the Argentine Republic, of Peru and Mexico, of Nevada, and of Cachinal de la Sierra are fully referred to, thus making the volume as complete and reliable a guide as need be desired.

**THE IRON AND IRONSTONE TRADE OF NORTHAMPTON.**—There is scarcely any one of our iron-making districts that has made greater progress than Northamptonshire, more especially as regards production of ore, large quantities of which are sent daily to South Wales, Staffordshire, Derbyshire, and the West Riding. It is less than 30 years since ironstone was discovered in Northamptonshire, and first worked by Mr. W. Butlin, at Wellington, and who was also the first to erect blast-furnaces for the smelting of it. In 1855 the quantity of stone raised in the county was 74,084 tons, and there was a gradual increase up to 1870, when a considerable impetus was given to the demand by a series of articles on the subject of the iron ores of Northamptonshire which appeared in the *Journal*, so that the output last year was close upon 1,500,000 tons, nearly three-fifths of which was put on to the Midland Railway for the North, Derbyshire taking the largest quantity. From Blisworth a considerable tonnage was sent into South Wales and Staffordshire via the London and North Western Railway. Several of the ironmasters in both Derbyshire and Notts now work the ore on their own account, amongst them being the Bestwood Company, who have had two furnaces in blast during the greater part of last year. The Staveley Company has also leased some ground so as to work it direct. In connection with the Northamptonshire field of ore may also be included the two adjoining counties of Rutlandshire and Oxfordshire, where the ores are similar, and all found in the Permian. They are all, no doubt, part and parcel of our great and continuous field, and which must ultimately become the principal feeder for the furnaces in nearly all parts of the kingdom, for the supplies are practically inexhaustible, and will be in vigour when the deposits of Cleveland are being worked out. The ore is now being extensively worked in Oxfordshire, and furnaces are about to be erected on the estate of the Duke of Marlborough. In Rutlandshire the ironstone runs into the Northamptonshire field, and a good deal is being raised, the Midland Railway Company having given facilities for its transport to the North. During last year there were 15 furnaces in blast in Northamptonshire, producing upwards of 200,000 tons of pig. The Glendon Iron Company, whose works are close to the Finedon station of the Midland Railway, for some years past have been the largest producers of iron in the county, and during 1882 had four out of their five furnaces in blast. The company, or rather Messrs. Checkland and Fisher, have a colliery at Ilkeston, in Derbyshire, from which they obtain supplies of fuel. At Islip, near Towcester, two out of the four furnaces have been in blast, and Mr. Plevins, who was the founder of the works, is also a colliery proprietor in Derbyshire. On the south side of the town of Northampton there are several works, but only the furnaces belonging to the Hunsbury Hill Coal and Iron Company have been in blast. Dr. Siemens and some other gentlemen started some works a few years ago at Towcester for making iron and steel by a direct process; but the two furnaces have been out of blast for a considerable time past, and there are no signs of their being lighted again, the quality of the ores, it is understood, not being such as to be suitable for the direct process. The furnaces at Weedon that were erected a good many years ago, and have frequently changed hands, have also been standing. Mr. W. Butlin, the father of the iron trade of Northamptonshire, has only had one furnace in blast; but he has been building a new one. At Kettering the Cransley Company have been working well, the two furnaces having been kept fully going for a considerable time past. Although the production of iron in Northamptonshire is not so large as might be expected, considering its vast resources, and in that respect is behind its more recently discovered competitor, Lincolnshire, yet it stands about second to Cleveland only as regards the quantity of ironstone raised, and so keeps a good many furnaces in other and distant districts fully going, and this it is likely to do for ages to come, and when other now important districts are entirely exhausted.

**PRIZES FOR USEFUL INVENTIONS.**—Among the prizes offered by the Society of Arts for the present session are several, for which many readers of the *Mining Journal* might compete with fair chances of success. Special mention may be made of the Benjamin Shaw prize—1. A society's Gold Medal, or 20l., for the best plan for "Obviating or Diminishing Risk to Life in the Operations of Coal Mining."—2. A society's Gold Medal, or 20l., for the best plan for "Obviating or Diminishing Risk to Life in the Manufacture, Storage, and Transport of Explosives." The council of the Society leave it to the competitors to bring the plans under their notice in any way they may think proper, whether by model, written description, or otherwise.—Howard Prize: A prize of 100l. for the best essay "On the Utilisation of Electricity for Motive Power." Preference is to be given to that essay which, besides setting forth the theory of the subject, contains records with detailed results of actual working or experiment. The society reserves the right of publishing the prize essay.—Fothergill Prize: A society's Gold Medal, or 20l., for the best invention having for its object the Prevention or Extinction of Fires in Theatres, or other Places of Public Amusement.—Mulready Prize: A society's Gold Medal "To that Student in a School of Art in the United Kingdom who exhibits the best Drawing from the nude figure, executed in black and red chalk, in the manner so successfully practised by Mulready." Designs, plans, models, essays, descriptions, inventions, &c., intended to compete for any of these must be sent before Oct. 31 to the secretary of the Society of Arts, John-street, Adelphi, London.

**MILD STEEL FOR LOCOMOTIVE FIRE-BOXES.**—In a paper read before the Institution of Civil Engineers, on Tuesday evening, Mr. John Fernie, M.I.C.E., stated that the use of mild steel for the fire-boxes of locomotive engines was now general in the United States. Although large numbers of the outer shells of the boilers were still made of iron plates, this was simply to effect a saving of expense, and many railroad companies had the boilers wholly of steel. Iron plates were first used as a substitute for copper, owing to the rapidity with which the anthracite coal wore away the soft copper. When sound the iron plates gave better results, but the weldings were frequently unsound; they were apt to blister, and the plates were subject to crack near the firebricks. Steel fire-boxes, the plates being a nearly pure compound of iron and carbon, were used for the Pennsylvania Railroad engines 11 years ago. Since then excellent steel for this purpose had been made by the Siemens-Martin open-hearth process in many places in the United States. The mode of manufacture of this steel was briefly described, as it differed from English practice. Describing first the English type of locomotive fire-box, and afterwards the various new forms of American fire-boxes, the author stated that in the former the strains set up by the greater expansion of the inner box over the outer from the higher temperature were aggravated from the material being of copper, which expanded more than iron under equal increments of temperature. Greater stress was thrown upon the stays, and by the use of copper and brass tubes a galvanic action was established in locomotive boilers, which speedily destroyed the iron plates. The American type was illustrated by two examples of boilers and fire-boxes in use on the Pennsylvania Railroad, and it was pointed out how far they approached the condition of what Mr. Fernie held to be a perfect fire-box of the old and well-known form. The requirements for a fire-box of this kind were, that the plates forming the outer and inner boxes should be of similar metal, that as the metal of the inner box must always expand more than the outer, it should be thin enough to bend or spring between the spaces where it was held by the

round stays, that to compensate for the extra expansion, the heavy roof-beam stays should be done away with, that there should be a number of water-tubes through the body of the fire-box, that the fire-bars should also be water-tubes, that the areas of the fire-box and grate should be large, and that the materials of construction should be cheap and easily obtainable. The American was, he said, in these respects far in advance of the English type of locomotive boiler. With regard to cost he showed that as steel fire-boxes were only half the weight of copper ones, and as the price per ton of the former metal was about one-third of the latter, the actual cost of steel fire-boxes was from one-fifth to one-sixth the price of copper ones, although the cost of labour would be a little more in working steel. The paper will be discussed on Tuesday next.

#### NEWFOUNDLAND—ITS HISTORY AND PROSPECTS.

The immense mineral wealth of Newfoundland has already been sufficiently demonstrated by the constant and heavy sales of copper ore, at the Swansea Ticketings from Betts Cove, Tilt Cove, and other Newfoundland Mines, although hitherto comparatively nothing has been done in the way of exploration, and the amount of capital embarked has been quite insignificant, yet English capitalists know scarcely anything of the province, much less of the riches which lie dormant there. This neglect of a really attractive field for enterprise is, however, not likely to continue, since Mr. Joseph Hatton, a highly popular descriptive writer, in conjunction with the Rev. M. Harvey, a scholar and a traveller, has just completed a handsome volume of 500 pages—*Newfoundland, the Oldest British Colony: its History, its present Condition, and its Prospects in the Future.* By Joseph Hatton and the Rev. M. Harvey. London: Chapman and Hall, Henrietta-street, Covent Garden—which will be ready for issue within the next week or fortnight. It is profusely illustrated, not only with engravings of some of the most attractive scenery, but with views of Betts Cove, of copper mining, and portraits of Cabot, King James I., Jacques Cartier, Sir Humphrey Gilbert, and other celebrities connected with the history of the province.

Whilst ardent sportsmen, to use Mr. Hatton's words, seek its forests and streams in pursuit of "fin and fur," the geologist is busy among its hills and valleys, and mining prospectors are busy examining the tracks of the Government surveyors. The first locomotives are running from the capital to the adjacent towns, and a tide of emigration is evidently on the eve of setting in upon its shores. No complete survey of its history and condition, its mineral and other resources, and its prospects for the future has ever before been made, so that Messrs. Hatton and Harvey's book is a cultivation of hitherto unoccupied ground. The work is systematically divided into six sections—the first containing the historical record, embracing six chapters; that on the physical geography and topography, natural history, &c., nine; on the fisheries, eight; and the agricultural resources, five. Two chapters are devoted to the mineral resources—the first treating of the pioneer work and prospects, the other of the metalliferous deposits and coal areas. To these, as well as to the concluding section on trade and railways, more extensive reference will be made as soon as the work is issued.

#### PUBLIC COMPANIES—THEIR CONSTITUTION AND CONDITION.

##### BURDETT'S OFFICIAL INTELLIGENCE FOR 1883.

The necessity for and utility of a volume which would furnish at a glance such details with regard to the management, finances, and so on of governments, corporations, and companies whose securities are commonly dealt in on the market, as would enable the capitalist or dealer to form some idea of the solidity of the concern and the prospects of its proving remunerative as an investment has long been acknowledged, but it was ever felt that such a work prepared by a private individual would necessarily be so imperfect that it could scarcely be hoped that it would be generally accepted as an authority. Hence there was an absence of anything beyond partial attempts to supply the want until the issue of the first edition of the work of which a new edition has just been published—*Burdett's Official Intelligence for 1883.* By HENRY C. BURDETT, F.S.S., secretary, Share and Loan Department, Stock Exchange. London: Effingham Wilson, Royal Exchange; and Couchman and Co., Throgmorton-street—bringing the information down to the present date. As the publication is under the sanction of the Stock Exchange, and considering that the position in that institution which the author occupies gives him the best possible facilities for acquiring correct information, the particulars supplied might be referred to with confidence, even apart from the circumstance that Mr. Burdett's accuracy and reliability have been tested by the previous volume.

The details given this year embrace a carefully revised précis of information regarding British, American, and foreign stocks; corporation, colonial, and provincial government securities; railways, banks, canals, docks, electric lighting, financial, gas, insurance land, mines, shipping, telegraphs, tramways, waterworks, and other commercial and industrial companies known to the London market, and dealt in on the principal exchanges. The particulars given include the name and registered offices of the companies, the voting powers conferred by the shares, the transfer fees and dates of shutting books, the capital authorised and called up, the dividends declared and date of payment, general details, with particulars of objects, &c., and names of directors and secretary, with the directors' qualification. There are well executed railway maps of Great Britain, Ireland, India, Canada, and South America; and a map of telegraph stations, so that for whatever purpose the book may be consulted the information sought will probably be found. Altogether there is an account given of nearly 3000 separate undertakings, representing about 6000 separate securities, of each of which all facts can be ascertained as to their origin and their progress or termination, as the case may be. The work will be of immense value in every place of business, and each fresh issue will add to its utility to all consulting it.

#### MINERS' PERMANENT RELIEF SOCIETY.

Although the survivors of sufferers by great colliery accidents, involving loss of lives by the dozen or the hundred, are often liberally and sometimes extravagantly provided for by the munificence of the public, the vast majority of accidents result in the loss of one or two lives only, and in these cases the survivors are almost entirely neglected; a small contribution from the club or Trades' Union, and, perhaps, the burial expenses, usually representing all the assistance received. The only remedy for this is a Permanent Relief Society, supported by miners, colliery owners, and the public; and taking cognisance of all accidents, whether resulting in one or in many deaths. An active movement in this direction has already been made in the Midland Counties, and it is much to be hoped that it will be carried to a successful issue both there and in all other districts in which collieries are worked.

During the past year a committee of the Derbyshire, Nottinghamshire, Leicestershire, and Warwickshire Colliery Owners' Association has been considering and maturing plans for the establishment of a permanent relief society, which should deal with the suffering caused by fatal accidents in mines. Upon the recommendation of this committee it was decided, at the recent annual meeting of the Colliery Owners' Association, to establish a relief society on the lines suggested, the basis being certain calculations and statistics collected by Mr. George Lewis and Mr. William Saunders, who suggest that the workmen's contributions should be one penny per week for whole members, and one-half penny for half members, the contributions of colliery owners being not less than 12½ per cent. on the amount contributed by the workmen. The workmen's contributions are to be paid by the local clubs, which will be relieved of the death rate and consequent liabilities, whilst their present method of working will not be in any way interfered with, the present contributions from the workmen being sufficient for both purposes. It appears that in 1881 there were 49,979 men and boys employed in the collieries of the four counties proposed to be included in the operations of the society. Of these 27,422 were employed in the collieries of Derbyshire, 21,322 underground, 6100 above ground. The coal raised in the four coun-



ties was 15,545,667 tons, of which 8,508,923 tons were contributed by Derbyshire. In 1881 there were 61 fatal accidents in the Midland Counties, attended with a loss of 64 lives, being one death for every 780 persons employed. The average death-rate in the Midland district during the last 14 years has been 65 per annum, being an average of one death per 180,191 tons of coal raised.

Having ascertained the probable amount of relief which will have to be provided, the next consideration appears to be the probability as to the necessary funds being forthcoming. Of this there seems to be no doubt, for Messrs. Lewis and Saunders's calculations show that it may be expected that the society will have to meet liabilities amounting to 2446l. per annum. To provide for this it is estimated that the local clubs will contribute 1950l., and the masters about 244l. yearly, leaving a comparatively small margin to be provided for by the public. The object of the society is so excellent, and the amount of good which it will do, is so large that there will certainly be no difficulty in securing the necessary support from the benevolent throughout the country.

#### THE GUMPEL ELECTRIC LAMP.

The simplicity and economy of the Gumpel lamp has already been referred to in the *Mining Journal*, so that the mechanical details of the inventor's automatic feed and simple method of regulating the arc will be interesting. The one electrode or carbon may be fixed, the other only being moveable, or when it is desired to maintain the arc in one position, both electrodes may be moved proportionally to their rate of consumption by connecting them by cords or wires passing round pulleys, as is well understood, the feeding and regulating apparatus being, however, applied only to one of them, which for clearness of description it may be assumed to be the upper carbon of a vertical lamp. This carbon passes freely down through the centre of a solenoid, which has its coil in the lamp circuit, and below this solenoid it is clamped between two rollers. One of these rollers is mounted in a light vertically sliding frame, and has on its axis a feed-wheel. The other roller is mounted on the vertical arm of a bell crank lever, which is pivoted on the light frame, and has its horizontal arm linked to the iron core of the solenoid above mentioned. The feed-wheel may be toothed as a ratchet-wheel, having its teeth engaged by a pawl, or it may have a smooth periphery engaged by a clamping pawl, such as is used for the silent feed in many known machines. The pawl is linked to the core of a second solenoid, which has its coil of high resistance in a bypass circuit connecting the conductors to and from the lamp. These parts operate as follows:—When no current passes the solenoids are inert, consequently the core of the first descends withdrawing the roller of the bell crank, and so leaving the upper carbon free to descend till it meets the lower carbon.

When a current passes the first solenoid becoming excited attracts its core upwards, and this moving the bell crank presses the roller of the bell crank against the carbon, which thus becomes clamped between the two rollers. The farther ascent of the core raises the light frame and the clamping rollers along with the carbon withdrawing it from the lower carbon, so that the arc is formed between the carbons. When by the consumption of the carbons the distance between them gives the arc more than its normal resistance, a larger portion of the current passes through the coil of the second or bypass solenoid, and it attracts its core upwards. The pawl attached to this core is thus made to turn the feed-wheel and its roller partly round so as to advance the carbon. Thus, according as the resistance of the arc varies, the one solenoid core acts by clamping and withdrawing or by liberating the carbon, and the other core acts by turning or releasing the feed-wheel, and so advancing or ceasing to advance the carbon, so that the arc is automatically maintained nearly constant. Instead of employing a vertically sliding frame as above described to carry the one roller and feed-wheel and the bell crank for the other roller, these parts may be carried on a lever arm pivoted to the framing of the lamp, and the bell crank may be worked by another arm carrying the armature of an electromagnet which may be substituted for the first solenoid. The carbons instead of being arranged vertically, in which case they are preferably counterbalanced, may be arranged horizontally or in other attitudes the clamping rollers and feeding mechanism nevertheless operating as above described. The end of one of the carbons may be held in a metallic socket, which when the carbon is nearly all consumed, makes contact with a spring, and so closes the external circuit, excluding the lamp from it, until this contact is broken for the introduction of a fresh carbon.

#### THE DOLCOATH DISTRICT.

Is it not remarkable that a whole district situated near Camborne should be called after the celebrated Dolcoath Mine. Price published his too little known "Mineralogia Cornubiensis" in 1778. At that time Dolcoath was worked as "Bullen Garden," and was then little more than 100 fathoms in depth. Price published the parallel section of Bullen Garden Mine, in the parish of Camborne, Cornwall, and explanation of its workings, under the title of "A general display of a mine by notes of reference to and explanation of every part of a whole sheet parallel section of Bullen Garden Copper Mine, wherein is exhibited all the machinery and workings from grass to the sump, showing every pump, saller, ladder, drift, stope, end, winze, and stull in the mine," and right well will the perusal of the description repay anyone desirous of knowing the magnitude and importance of modern improvements in machinery for working mines. The old fire-engine, one of the first pumping-engines erected in Cornwall—the working by means of two water-wheels fixed underground, and discharging their water at the adit; all have their interest. That the mine was also known as Dolcoath is clear from the fact that it is in another part of the work referred to as "Dol-coth (the old valley or dale), the name of a great mine in Camborne, Cornwall."

It is a curious fact that Borlase, in his "Natural History of Cornwall," published in 1758, takes no notice of Dolcoath, but publishes a plan of Pool Mine, which one inclines to think is the celebrated adjoining mine of Roskear, and not East Pool.

It is to be regretted that Price does not give the then past or present returns of ores raised in Dolcoath. Many interesting treatises have been written by local men on this district, one a lecture of considerable interest by a late manager of Dolcoath, Capt. Charles Thomas, the father of the present manager, Capt. Josiah Thomas, which might well be re-published. Tregellas says: "Probably Dolcoath Mine is one of the deepest and most ancient in Cornwall, and may be pronounced the most typical mine in Cornwall. It is now more than 340 fms. deep, and has sold ore to the value of 6,500,000l. sterling, and never looked better than it does now. The average value of a fathom of ground is 150l."

The Dolcoath lodes have produced large quantities of silver ore—indeed the richest deposit ever found in Cornwall, and had its own smelting-house on the mine for the reduction of these ores.

From the following list of 13 closely adjacent mines it will be seen that their aggregate price has in four years steadily risen from 454,195l. to 1,371,061l. their market value in January, 1883, showing the increase in their value biennially from 1878 to 1883:—

|                     | 1878.          | 1880.            | 1883.            |
|---------------------|----------------|------------------|------------------|
| Carn Brea .....     | £35,000 .....  | £110,000 .....   | £51,000 .....    |
| Cook's Kitchen ..   | 4,000 .....    | 26,950 .....     | 97,625 .....     |
| Dolcoath .....      | 128,800 .....  | 244,875 .....    | 289,980 .....    |
| East Pool .....     | 60,800 .....   | 23,400 .....     | 336,000 .....    |
| South Condurrow ..  | 70,415 .....   | 67,353 .....     | 58,169 .....     |
| South Crofty .....  | 3,800 .....    | 22,000 .....     | 20,430 .....     |
| South Frances ..... | 7,500 .....    | 22,528 .....     | 48,000 .....     |
| Tincroft .....      | 54,000 .....   | 126,000 .....    | 40,500 .....     |
| West Basset .....   | 18,000 .....   | 93,000 .....     | 39,000 .....     |
| West Frances .....  | 7,500 .....    | 22,528 .....     | 16,404 .....     |
| West Seton .....    | 54,000 .....   | 22,000 .....     | 42,000 .....     |
| Wheal Agar .....    | 25,500 .....   | 37,500 .....     | 105,000 .....    |
| Wheal Grenville ..  | 13,000 .....   | 66,000 .....     | 49,500 .....     |
|                     | £454,195 ..... | £1,116,731 ..... | £1,371,061 ..... |

Dolcoath has paid in dividends over 41,000l., and East Pool over 43,000l. for the year 1882.

Attention is now drawn to this district from the fact that the ground under the town of Camborne, of which for local reasons now removed it has heretofore been impossible to obtain a lease, has now been obtained. In this ground a shaft exists to the depth of 180 fms., which is in excellent condition, and from which cross-cuts can be extended to intersect the Dolcoath lode in the centre of the mine at a comparatively small expense. The mine being dry to this depth, and the shafts being in good repair, the work done is immensely valuable, not only in saving money but time. Thus the long-coveted Town lode will be laid open, and the Dolcoath lodes, rich up to the boundary of the proposed Wheal Camborne, will be laid open, and a great impetus given to the mining industry of this celebrated district.

#### WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS,  
MINEOWNERS STOCK AND SHARE DEALERS &  
1, ST MICHAEL'S ALLEY, CORNHILL, LONDON.

Nearly twenty years ago the weekly information which had previously been published for a great number of years in WATSON BROTHERS' Mining Circular was transferred to the columns of the *Mining Journal*, with the following announcement.

In the year 1843, when mining was almost unknown to the general public attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. Watson, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1852), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, published annually in the *Mining Journal* for 21 years, &c., &c. In the Compendium, published in 1843, Mr. Watson was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messrs. WATSON BROTHERS have always selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share-dealing than there is at present; and from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services and advice to all connected with mines and mining.

Messrs. WATSON BROTHERS are daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

The great extension of mining business, the difficulty so often complained of by country shareholders in getting accurate and disinterested information as to the state of Cornish and Foreign Mines, and of the financial and real position of mining companies generally, have induced Messrs. WATSON BROTHERS to make their Circular now published in the *Mining Journal* more extensively known, and to state—

That they issue daily to clients and others who apply for it a Price List (as supplied to most of the London and country papers), giving the closing prices of Mining Shares up to four o'clock.

They also buy and sell shares for immediate cash, for the usual fortnightly settlement in all Mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charge for commission. They deal also, on the same terms, in the Public Funds, Railways, Telegraphs, and all other Securities dealt in on the Stock Exchange.

Having agents in all the mining districts, they are constantly getting mines inspected for their own guidance, and will also obtain special reports of any particular mine for their clients, for the inspecting agent's fee of 42s.

Messrs. WATSON BROTHERS take this opportunity of stating that on July 1 they took into partnership Mr. H. J. DEAN, who has been for a number of years associated with the firm, and Mr. W. H. H. WATSON, who has had some years experience of practical mining and engineering in Cornwall, and is the son of the senior partner. The firm will still be called that of "Watson Brothers."

The number of weekly communications received from almost every part of the world in regard to remarks in this Circular indicate so plainly how much they are read (and we trust, appreciated) that they will be continued by the same writer.

Indeed, while new blood is introduced to attend to the more laborious and mechanical details of the business, the old will have more time to devote to their different departments.

An extraordinary general meeting of Parys Copper Corporation has been called for Monday next, to authorise the directors to issue the 7667 reserve shares at 10s. per share (1l. paid). They had power under the Articles of Association to issue up to a certain number of shares at a discount or otherwise, and nearly 2000 of that lot are still unissued; but as the directors wish to issue 3000 at least, it is necessary that a special resolution should be passed authorising the issue of all, or any part, of the 7667. We hope the shareholders will consider before the meeting that it is absolutely necessary the directors' hands should be strengthened by the issue of these shares, and to save the mine they must be taken up. We have a good cause, and should fight it out.

As a rule the copper ore of Cornwall is not so rich as it used to be, and which may be in some measure accounted for by the greater depth attained by many, if not most, of the mines. Shallow deposits are generally the richest. In October, 1845, some remarkably rich ore was sold, the richest indeed we ever heard of from Cornwall. Penruthal sold some at 60l. per ton; Carn Brea, in November of same year, at 35l. per ton; Levant at 40l.; and St. Ives Consols at 40l. per ton. There can be no doubt that much of the depression existing in the Mining Market at the present time is owing to the enormous losses in Indian gold mines. It was calculated that three millions at least was invested in them, most of which went to promoters and others, and then many went to high premiums, and are now at a discount. Again, numbers of persons, attracted by the quoted premiums, and finding that only 2s. 6d. had to be paid on application in order to get shares, applied for hundreds of them, thinking to sell them and pocket the premiums at once; and failing in this, they found themselves called upon to pay calls up to 1l. per share—a thing they neither anticipated nor were prepared for.

The want of a good discovery also in Cornish Mines is much felt just now. Another rise, such as there was in Crebor, from 1s. 6d. to 13l. per share in a few months, in some other low-priced shares, would give a general fillip to the market; and at present the reports of agent, and what we hear, would lead us to expect the earliest improvements on discoveries in New West Caradon, Langford, or West Crebor.

South Penruthal is also well spoken of, and there is a fine lode for copper in the shaft.

At Prince of Wales the 102 east is looking better.

A great improvement is taking place in the 50 east at East Blue Hills; lode 3 ft. wide, and looking like being near a good course of tin.

The sampling at Wheal Crebor (413 tons) assays as follows:—88 tons 5½ per cent., 87 tons 5½, 86 tons 8½, 80 tons 5½, 72 tons 5½, average 6½ per cent.; this we estimate will realise 1400l. The 86 tons of 8½ per cent. produce—which is the richest parcel got from the mine for some time—is from the bottom of the 120, east of No. 2 winze. This is an important fact.

South-East Wynaads are now quoted under 1; a few weeks ago they were quoted 3 to 3½. Glenrocks at one time, we believe, were very high, and are now 10s. to 15s. We are not acquainted with the prospects of either, and cannot therefore answer our correspondent's queries. La Plata used to pay monthly dividends, and the fall is owing to their cessation as monthly dividends. Good returns, however, appear to be made.

Santa Barbara, since 1875, has made 29,000l. profit on a paid-up capital of 26,016l. 10s. This was from the Pari Mine, Brazil. For some time past a large expenditure has been going on (nearly 12,000l.), for new machinery and other works, and when completed, in about four months, and the mine opened out, the directors anticipate making 10,000l. a year profit. In the meantime they, like other directors, find the difficulty of issuing fresh shares in these times, and are now offering to the shareholders or the public 10,000l. 10 per cent. mortgage debentures of 50l. each to be paid off on Jan. 1, 1888. The mines have since 1875 returned gold to the value of 133,583l. 15s. 9d., which, as before stated, made a profit of 29,271l. 19s. 1d., all of which was divided except a reserve fund of 8000l., and a small balance of 489l.

#### Original Correspondence.

##### CALLAO BIS GOLD MINING COMPANY.

SIR,—I beg to enclose you a copy of a letter which has been received by this company from Mr. George Attwood, their late consulting engineer, and shall be glad if you can find space for same in your next issue.—London, Feb. 2. J. H. THORNTON, Secretary.

SIR,—In a letter signed by Mr. C. C. Downes in the *Mining Journal* of Jan. 27 that gentleman, in referring to the cutting of the Callao vein, appears to forget that I was the directing superintending engineer and geologist for the opening of the Callao Bis Mine and that during my stay in Venezuela he was instructed to act under me. Shaft No. 1 was started after my inspection and by my orders, and in that shaft the Callao vein has lately been cut. I refer you to the following extract from my contract with the Callao Bis Gold Mining Company, Limited, dated Sept. 29, 1880:—"The said George Attwood shall and will act as the consulting engineer of the said company and shall and will, not later than Oct. 2 next, proceed to the district of the said mines for the purpose of directing as superintending engineer and geologist the opening of the Callao Bis Mine."

Ulster-place, Regent's Park, Feb. 1. GEORGE ATTWOOD.

##### HERODSFOT SILVER-LEAD MINE.

SIR,—The following, which will be interesting to many of your readers, is a copy (the original certificate can be seen at my office) of the assays by Messrs. Johnson, Matthey, and Co., made for lead and silver from four samples of ore from different points of operations, referred to in the agent's report of last week:—

Hatton Garden, Jan. 27.

| CERTIFICATE OF ASSAY.    |                      |                  |
|--------------------------|----------------------|------------------|
|                          |                      | Produce of Lead. |
|                          |                      | Ozs. Silver.     |
| No. 1, Herodsfot Mine .. | 61.0 per cent. ....  | 110.0            |
| No. 2 " " " " " " " "    | 65.5 " " " " " " " " | 31.500           |
| No. 3 " " " " " " " "    | 51.0 " " " " " " " " | 30.0             |
| No. 4 " " " " " " " "    | 30.5 " " " " " " " " | 39.0             |

Per ton of 20 cwt.

It is of the utmost importance that sample No. 1 came from a new point of development. Having cleared the 160 fm. level north, and driven it through the slide or cross-course so recently as last December, a stope was commenced in the back of the level, from which stope the above rich ore was broken; the lode is here standing in whole ground for 30 fathoms high and 150 fathoms in length to the north. Some of the richest stopes said to exist in the mine, but which have been abandoned for, I am informed, 20 years, in consequence of the water being at that time "too quick," have quite accidentally become again accessible through the extra pressure or weight of water that has flowed down during the late excessive floods of rain into some old workings, unable to resist the extra pressure, breaking away, but which almost flooded the mine.

The manager writes: "Last Friday night we were almost flooded with water, and could not tell where it came from; it has taken our engine working six strokes per minute for three whole days to fork it. Have since discovered that the water broke through an old stope in the 127 fm. level north, down to the 147, and thence into the 160 fm. level. This ground is now standing dry. Between the 147 and the 127 level there are three stopes, commenced by the late company, who were obliged to abandon them in consequence of the water being too quick, now available, the stopes produce rich silver-lead ore. We find the lode standing in places 5 ft. wide. All above the 127 has been taken away, proof of the lode having been valuable. We are putting in a footway from the 160 to the 147, in order that stoping may be commenced at once in this unexpected and extensive run of dry ground. We believe we have many hundreds of fathoms of dry ore ground here to take away."

It is rather too soon to estimate the additional value that, though so sudden, at the same time, it must be considered, under the circumstances, fortunate catastrophe, has been added to the mine. When the agents have fully realised to what extent valuable ground has been freed of water they will send their report, which shall be published without delay.

GRANVILLE SHARP,  
Secretary of Herodsfot Mine.

Queen Victoria-street, Feb. 1.

COMPOUNDS FOR ELECTRICAL INSULATION.—An invention, which appears to embrace the use of almost any material whatever, in any manner preferred, is claimed for Mr. G. S. PAGE, of Stanley, U.S.; but the English patent has not been granted for it. He states that he takes any or all of the mineral substances included in a long list: metallic oxides, silicates, phosphates, aluminates, borates, carbonates, sulphur, selenium, or compounds of these; sulphides, &c.; compounds of tungsten and the like minerals; pseudo carbons and carbon in various forms in a state of fine division and suitably dried by heating, which incorporates with the various organic substances either singly or in combination obtained from and by the preparation of certain portions of coal tar, coal tar oil mineral oil or shale oil naphthalene, anthracene, pyrene chrysine and their homologues and derivatives, from bitumen, natural asphalt, colophony, resins, natural gums, and mineral wax, and hydrocarbons, varieties of gutta-percha and caoutchouc, camphor in various forms or varieties, cellulose in various forms, as pyroxiline, &c.; also so-called waste organic substances, containing nitrogen in an albumenoid form of combination, tannin and other substances, containing tannic or tannogallic acid, so called; leather and horn substances, &c., the said organic substances being for this purpose obtained and employed in a liquid, semi-liquid, or gelatinous condition, as may be brought about by fusion or the employment of solvents. He proposes that in cases where great density or hardness in the insulating material are not required as for example in covering land lines, the said substance or preparation may be employed direct. For the formation, manufacture and fashioning of material or instruments of any particular or required hardness, density, or plasticity, he proposes to increase the hardness and elasticity of the insulating material by the application of pressure in graduated degree and by any ordinary apparatus or instrument for the purpose of applying pressure, but preferably by the application of hydraulic pressure at a more or less elevated temperature, depending on the special use and application of the insulating material. In this manner he obtains a highly electrical and heat insulating material of any desired elasticity and hardness, which can be fashioned and worked to any required form, and has a high degree of incombustibility.

IMPROVEMENTS IN TELEPHONES.—A novel construction and arrangement of a telephonic receiving instrument in combination with any known transmitting instrument has been patented by Messrs. ALABASTER, GATEHOUSE, and KEMPE, of South Croydon. At each end of a suitable case they fix a plate and stretch between these plates an iron or steel wire, round which are closely wound two coils of insulated wire. One of these coils which may be of coarse wire, connects the poles of a local battery, the other coil, which is preferably of fine wire, is connected to the line at its one end and to earth at its other end. When electrical undulations, produced by pulses of sound on a transmitting instrument of any known kind, are sent along the line, the iron or steel wire of the receiving instrument above described is acted on, and its plates are caused to vibrate, reproducing the sounds which actuate the transmitter. It is convenient to enclose the two plates of the instrument in casings, and lead from these casings flexible tubes, so that the sounds can be conveyed to both ears. A transmitting instrument of any known kind can be connected into the wire of the local battery, and this transmitter will serve for sending to the distant station. Instead of employing only one wire to connect the plates several wires may be used each doubly coiled as above described, by wires connecting respectively to the local battery and to the line. Also instead of employing only two plates, several pairs of plates may be employed, each pair connected by one or more iron wires coiled as above described, and these plates may be placed face to face at each end of the casing, the wire for the outer plates in each case passing freely through holes in the inner plates. In some cases the iron wire may have only one insulated wire coiled on it, the said wire being con-



the papers read and discussion upon them; whilst in the appendix there is a good account of the visits and excursions, and an obituary which is unfortunately unusually heavy, embracing the names of William Menelaus, Sir H. W. Ripley, Lord Frederick Cavendish, A. L. Holley, Thomas Aveling, William Newmarch, J. T. Barkley, C. P. Stewart, Charles Smith, W. S. Roden, William Neilson, William Barningham, Alfred Kitching, H. Currier Briggs, and J. G. Chapman. The second half of the volume (London: Spon, Charing Cross) is occupied by Notes on the Progress of the Iron and Steel Industries of the United Kingdom in 1882, by the general secretary—Mr. J. S. Jeans—which contain a very excellent and interesting outline of all that concerns the iron trade which has been published during the year. Reference is greatly facilitated by Mr. Jeans's admirable classification of the paragraphs according as they relate to ores and fuel blast furnace practice, manufacture of steel, chemical properties of iron and steel, mechanical properties of steel, uses of steel, or miscellaneous, and arranging the foreign record with equal attention to system.

**SECONDARY BATTERIES.**—The invention of Mr. **LUDWIG EPSTEIN**, of High Holborn, consists in forming each cell of the battery of an outer vessel of wood or other material, and a porous cell within it. Between the exterior of the porous cell and the sides of the outer vessel he places a spiral scroll of sheet lead of several convolutions. Within the porous cell he places a similar scroll of a smaller diameter. These scrolls form the electrodes of the cell. To charge the battery he prepares saturated solution of permanganate of potash, and to this he adds 10 per cent. of sulphuric acid and 10 per cent. of methylated spirit. He forms the battery by passing through it the current from a dynamo electric machine or other source of electricity. After the connections have been reversed a few times the battery is ready for use in the ordinary manner. According to another method he prepares his cell with a number of flat plates of lead parallel to each other, and packed with powdered charcoal between. He couples together the alternate plates, charge the cell with the permanganate solution, and apply the current as before. The passage of the current causes the metal of one set of plates to become rapidly peroxidised, and on the reversal of the current this peroxide is reduced to a spongy metallic state, whilst the other plates in turn are peroxidised.

TIN.

Thomas Bolitho and Sons, Chyandour, Cornwall.  
Williams, Harecy, and Sons, Chyandour, Trebhelian and Mellanear, Cornwall.  
Daubuz and Company, Cavedra, and Treloewth, Cornwall.  
R. R. Micell and Company, Trelefe, Penzance Cornwall.  
Bissoe Bridge Company, Bissoe, near Truro, Cornwall.  
Redruth Tin Smelting Company, Redruth Cornwall.  
Calenick Tin Smelting Company, Calenick, Cornwall.  
Charlestown Tin Smelting Company, Charlestown, St. Austell.  
Penpoll Tin Company, Redruth.

COPPER.

Vivian and Sons, Hafod, Swansea.  
Pascoe Grenfell and Sons, Middle Bank, Swansea.  
Nevill, Druce, and Company, Llanelly.  
Williams, Foster, and Company, Swansea.  
Mason and Elkington, Pembrey.  
Copper Miners' Company, Aberavon.  
Charles Lamb and Company, Port Tennant, Swansea.  
The British and Foreign Copper Company, Liverpool and St. Helen's.  
Landore Copper Company, Landore, near Swansea.  
Newton, Keates, and Company, St. Helen's.  
Baxter and Company, St. Helen's.  
Bibby, Sons, and Company, St. Helen's and Liverpool.  
W. Roberts, jun., St. Helen's.  
James Keys and Son, Wiston Works, Cheadle, Staffordshire.  
Cape Copper Company, Swansea.  
Ravenhead Copper Company, Liverpool.  
Pontifex and Wood, Garratt Copper Mills, Surrey.

Bewick and Partners (Limited), Hebburn, Newcastle-on-Tyne.  
 Nevill, Druce, and Company, Llanelli.  
 Runcorn Smelting Company, Runcorn.  
 Sheldon, Bush, and Panther Smelting Company, Blackswarth, near  
 Bristol.  
 C. Pass and Son, Bedminster Works, Bristol.  
 Weston, Sons, and Company, Bristol.  
 Cookson and Company, Howden, Newcastle-on-Tyne.  
 Locke, Blackett, and Company, Wallsend-on-Tyne.  
 Executors of Jos. Dinning, Haydon Bridge.  
 Vivian and Sons, Swansea.  
 Enthoven and Sons, London.

**LEAD.**  
Bewick and Partners (Limited), Hebburn, Newcastle-on-Tyne.  
Nevill, Druce, and Company, Lanely.  
Runcorn Smelting Company, Runcorn.  
Sheldon, Bush, and Panther Smelting Company, Blackswarth, near Bristol.  
C. Pass and Son, Bedminster Works, Bristol.  
Weston, Sons, and Company, Bristol.  
Cookson and Company, Howden, Newcastle-on-Tyne.  
Locke, Blackett, and Company, Wallsend-on-Tyne.  
Executors of Jos. Dinning, Haydon Bridge.  
Vivian and Sons, Swansea.  
Enthoven and Sons, London.  
Locke, Lancaster, and Company, London.  
Pontifex and Wood, Farringdon Works, London.  
Logan Edward, Birkenhead.  
Par Lead Smelting Company (C. Remfrey), Par, Cornwall.  
Peter Glover and Robinson, Widnes Lead Works, near Warrington.  
White Rock Works, Swansea.

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CARGO FLEET-IRON COMPANY (Limited).—Capital 200,000*l.*, in shares of 50*l.* The following businesses:—Ironmasters, colliery proprietors, mineowners, farmers, shipbuilders, merchants, manufacturers, and traders for all purposes. The subscribers (who take one share each are)—H. F. Swan, Newcastle-on-Tyne; J. Swan, Newcastle-on-Tyne; S. F. Swan, Newcastle-on-Tyne; J. G. Swan, Middlesbrough-on-Tees; C. W. Bell, Yewhurst; L. R. Stevenson, Oxtou; J. J. Burton, Middlesbrough.

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THE TELEPHONE COMPANY OF EGYPT (Limited).—Capital 100,000*l.*, in shares of 5*l.* The subscribers (who take one share each) are—G. E. Gorman, Upper Norwood; W. G. Hall, Streatham Hill; J. S. Cooke, 5, Raymond Buildings; R. S. Cuff, Tottenham; J. Hyles, 26, Tavistock-street; H. A. Pentish, Clapham; L. J. Marten, 21, Cannon-street.

THE CAMBRIAN PATENT FUEL COMPANY (Limited). Capital 25,000*l.*, in shares of 10*l.* To purchase or otherwise acquire the Cambrian Patent Fuel Works, situated near Cardiff, and to carry on the business of patent fuel makers in England or abroad. The subscribers (who take one share each) are—J. Hall, 1, New London-street; H. Langridge, 16, Great St. Helen's; W. W. Mann, 1, East India Avenue; J. Newton, 79, Mark-lane; W. Davies, Pontypridd; G. H. Noel, Cardiff; S. K. George, 1, East India Avenue.

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|         |                    | LEAD  | ORES.          |                        |
|---------|--------------------|-------|----------------|------------------------|
| Date.   | Mines.             | Tons. | Price per ton. | Purchasers.            |
| Jan. 30 | Pierrefitte        | 25    | \$23 7 6       | Quirk, Barton, and Co. |
| —       | ditto              | 35    | 15 12 6        | ditto                  |
| Feb. 1  | Van                | 160   | 10 8 0         | Walker, Parker, & Co.  |
| —       | ditto              | 80    | 10 7 0         | ditto                  |
| —       | Roman Gravels      | 150   | 9 6 0          | ditto                  |
| —       | ditto              | 50    | 9 2 6          | Adam Eytton.           |
| —       | ditto              | 50    | 9 2 6          | Runcorn Company.       |
| —       | East Roman Gravels | 15    | 8 14 0         | Walker, Parker, & Co.  |

| BLENDE.  |                         |       |                |                         |
|----------|-------------------------|-------|----------------|-------------------------|
| Date.    | Mines.                  | Tons. | Price per ton. | Purchasers.             |
| Jan. 25- | Talacre & Gronant.....  | 10    | £ 4 6 0        | ..... Vivian and Sons.  |
| —        | ditto (slime) .....     | 10    | 3 7 0          | ..... ditto             |
| 27-      | Pierrenette .....       | 100   | 3 9 0          | ..... ditto             |
| 30-      | Cwmystwyth .....        | 30    | 3 8 0          | ..... ditto             |
| 31-      | Frongoch .....          | 150   | 3 12 0         | ..... ditto             |
| —        | ditto .....             | 150   | 3 12 0         | ..... ditto             |
| Feb. 1-  | Tankerville Gt. Con. 35 | 35    | 4 5 0          | ..... Dillwyn and Sons. |
| —        | ditto .....             | 35    | 4 5 0          | ..... Vivian and Sons.  |

**IRON AND STEEL INSTITUTE.**—The second volume for 1882 of the Transactions of this society has just been issued, and contains a full report of the Vienna meeting of the Institute, together with



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All communications for Mr. BAILEY should be mailed to—  
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MINING ENGINEER.

**ALEX. DEL MAR,**

Mining Engineer, late Director of the United States Bureau of Statistics, Mining Commissioner for the United States Monetary Commission &c., 216, RANSOME STREET, SAN FRANCISCO.  
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**LIEBIG'S EXTRACT OF MEAT AND MALT WINE**  
 (COLEMAN'S).  
 A DELICIOUS BEVERAGE AND TONIC

IMPORTANT TESTIMONIAL.

Queen's Crescent, Haverstock Hill,  
 London, March 5th, 1881.

DEAR SIR,—Some time since, being greatly fatigued with overwork and long hours at business, my health (being naturally delicate) became very indifferent. I lost all energy, strength, and appetite, and was so weak as to be scarcely able to walk.

As you are aware, I sent for a dozen of your Extract of Meat and Malt Wine, which, in a few days, pulled me up marvellously. Three or four glasses of it daily have quite altered and restored me to better health than ever, "without the assistance of a doctor."

I am now giving it to my son, twelve years of age, whom we have always thought consumptive, and from a puny ailing boy he seems to be fast growing into a strong healthy lad.

Enclosed you have cheque. Please send me two dozen of the "Extract." With thanks for your prompt attention to my last.

I am Sir, yours truly,

GEORGE A. TYLER.

Pints, 30s.; Quarts, 50s. per dozen. Carriage Paid to any Railway Station. Sample Bottle sent free for 33 stamps.

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Sold by all Druggists in Bottles 2s. 9d. and 4s. 6d. each. Ask for Coleman's Liebig's Extract of Meat and Malt Wine, and "See that you get it."

**MAPS OF THE MINES, AND OF UTAH TERRITORY**

**FROISETH'S NEW AND REVISED MAP FOR 1875.**—Size 40 by 56 inches, scale 8 miles to the inch. Handsomely engraved, coloured in counties, showing the Towns, Settlements, Rivers, Lakes, Railroads, Mining Districts, &c., throughout the Territory, and all the Government Surveys to date. Mounted on cloth, £2; half-mounted, £1 12s.; pocket form, £1. Also, GENERAL MINING MAP OF UTAH, showing twenty-eight of the principal Mining Districts adjacent to Salt Lake City, and location of the most prominent mines. Price, pocket form, 6s. Also, NEW MAP OF LITTLE AND BIG COTTONWOOD MINING DISTRICTS showing the location of over Four Hundred Mines and Tunnel Sites, together with the Mines Surveyed for United States Patent. Price, sheets, 6s.; pocket form, 6s.

For sale, and supplied by—  
 TURNER and Co., 57 and 59 Ludgate Hill, London.  
 B. A. M. FROISETH, Salt Lake City, Utah, U.S.

**In the Court of the Vice-Warden of the Stannaries,  
 Stannaries of Cornwall.**

**IN THE MATTER OF THE COMPANIES ACT, 1862, and in the MATTER OF THE BREAGE UNITED TIN MINES COMPANY (LIMITED).**  
 Notice is hereby given, that a PETITION for the WINDING-UP of the ABOVE-NAMED COMPANY by the Court, was, on the 27th day of January inst., presented to the Vice-Warden of the Stannaries by JOHN EDEY and EDWIN EDEY, carrying on business as John Edey and Company, of Sheffield, in the County of York, and of 18, Queen Victoria-street, in the City of London, Chartered Accountants, claiming to be creditors of the said company, and that the said Petition is directed to be heard before the Vice-Warden, at the Prince's Hall, in Truro, in the County of Cornwall, on Wednesday, the 21st day of February next, at Eleven o'clock in the forenoon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the Petitioners, their solicitors, or their agents, of his intention to do so, such notice to be forthwith forwarded to R. M. PAUL, Esq., Secretary of the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the Petition and affidavit verifying the same from the Petitioners, their solicitors, or their agents, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 19th day of February next, and notice thereof must, at the same time, be given to the Petitioners, their solicitors, or their agents.

HODGE, HOOKIN, AND MARRACK, Truro, Cornwall  
 (Agents for Rogers and Chave, 3 and 4, Great Winchester-street  
 Buildings, London, Petitioners' Solicitors.)

Dated Truro, January 30, 1883.

**VALUABLE MINING PROPERTY AND PLANT,  
 STANHOPE, DURHAM.**

BY ORDER OF THE LIQUIDATOR.

**NORTHERN LEAD MINING COMPANY (LIMITED).**  
 VALUABLE PLANT AND MINING PROPERTY, comprising LEASES OF THREE DISTINCT and IMPORTANT MINES, situate in the immediate neighbourhood of Mr. Beaumont's celebrated mines, and comprising ENGINES, WATER-WHEELS, CRUSHER, PUMPING, and WINDING-GEAR, TRAMWAYS, WAGON, and a large quantity of MINING IMPLEMENTS.

**MR. HERBERT H. FULLER** is instructed TO SELL THE ABOVE VALUABLE PROPERTIES BY AUCTION at the Mart, Tokenhouse-yard, Lothbury, London, E.C., on Thursday, February 15th, at One o'clock precisely.

The leases, plant, &c., will first be offered in one lot, and in the event of their not being sold the plant and machinery will be offered alone. Copies of inventory with full particulars and conditions of sale may be obtained from the liquidator, WILLIAM EDWARDS, Esq., of Waterdale, Wolverhampton; or from the Auctioneer, 1, Queen Victoria-street, London, E.C.

BY ORDER OF THE MORTGAGEES.

**PANDORA LEAD MINING COMPANY  
 (LIMITED).**

VALUABLE LEASES, BUILDINGS, and PLANT of the PANDORA LEAD MINES, near Llanrwst, Carnarvon, comprising ENGINES, WATER WHEELS, CRUSHERS, PUMPING and WINDING GEAR, TRAMWAY, WAGONS, and all necessary MINING IMPLEMENTS.

**MR. HERBERT H. FULLER** is instructed TO SELL THIS PROPERTY, BY AUCTION, in One Lot, at the Mart, Tokenhouse-yard, on Thursday, February 15th, at One o'clock precisely.

Particulars and conditions of sale may be obtained from FREDERICK FOSS, Esq., Solicitor, Abchurch-lane, City; and from the Auctioneer, 1, Queen Victoria-street, City.

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There are about 40 companies in the vicinity of the property in a circumference of 15 miles around, and many English companies among them, so this property is well known in English mining circles; it would be a good chance for an English Syndicate, from 10 to 20 companies could be formed on this property. The same is the centre of the gold belt in North Carolina, and will make the best mining property in the United States.

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Letters addressed "L. G. N." care of MINING JOURNAL Office, 26, Fleet-street, E.C., (where the map referred to can be seen) will be forwarded to the advertiser.

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| 25                   | ditto           | ditto (without)                    | ditto |
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| 10, 8, 7, and 5 h.p. | single cylinder | PORTABLE or SEMI-PORTABLE ENGINES. |       |
| 6, 4, and 3          | ditto           | VERTICAL STEAM ENGINES.            |       |

A 6 h.p. combined ENGINE, BOILER, and 6 ft. van Mortar Mill on wheels. Also several excellent secondhand PORTABLE STEAM ENGINES.  
 12 h.p. double cylinder PORTABLE ENGINE, by Burrell and Son.  
 8 single cylinder ditto Marshall and Son.  
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 6 ditto ditto Hornsby and Son.

A Cornish BOILER, 8 ft. 10 long x 4 ft. 6 diameter.  
 A ditto 9 ft. 10 long x 3 ft. 2  
 A CIRCULAR SAW TABLE, 5 ft. x 2 ft. 6, with 30 in. saw.  
 A BAND SAW MACHINE, 30 in. pulleys.

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**STEAM BOILERS FOR SALE, SECONDHAND**, with and without Galloway Tubes, single and double rivetted, working pressure of 60 lbs., 65 lbs., and 80 lbs. steam pressure. VERY CHEAP.  
 FIVE BOILERS, 30 feet by 7 feet 6 inches diameter, excellent order.  
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 FOUR BOILERS, 28 feet by 7 feet " "  
 THREE BOILERS, 26 feet by 7 feet " "  
 FOUR BOILERS, 24 ft. by 6 ft. 6 in. " "

WINDING ENGINES and COLLIERY PLANT of every description, second-hand, in stock. VERY CHEAP. Write to—  
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**FOR SALE—**  
 ONE 50 inch and ONE 40 inch PUMPING ENGINES, with BOILERS and FITTINGS.  
 ONE 22 inch ROTARY ENGINE.  
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All the above Engines are in first-class condition. Several WATER WHEELS, from 20 to 60 feet diameter. STAMPS' AXLES and a large quantity of SECONDHAND MINING MATERIALS.

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 FIRST-CLASS 50-inch cylinder PUMPING ENGINE  
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**VALUABLE MINES FOR DISPOSAL.**—E. V. J., Calle San Juan, 55, Madrid, can DISPOSE OF A MINING DISTRICT, producing 10 tons of lead and 20 kilograms of silver daily, besides OTHER MINES OF COPPER, LEAD, IRON, ANTIMONY, MANGANESE, and PHOSPHATE OF LIME.

**In the High Court of Justice—Chancery Division.**

MR. JUSTICE KAY.

IN THE MATTER OF THE COMPANIES ACTS, 1862 AND 1867, AND IN THE MATTER OF THE NORTH OREGON GOLD MINING COMPANY (LIMITED).

**THE CREDITORS OF THE ABOVE-NAMED COMPANY** are required, on or before the 27th day of February, 1883, to SEND their NAMES and ADDRESSES, and the PARTICULARS of their DEBTS or CLAIMS, and the names and addresses of their solicitors (if any) to HENRY JOHN LESLIE, of 4, Coleman-street, in the City of London, the Official Liquidator of the said company, and, if so required, by notice in writing from the said Official Liquidator, are, by their solicitors, to COME IN and PROVE their said DEBTS or CLAIMS, at the Chambers of Mr. Justice Kay, at the Royal Courts of Justice, Strand, in the County of Middlesex, at such time as shall be specified in such notice, or, in default thereof, they will be EXCLUDED from the BENEFIT of any DISTRIBUTION made before such debts are proved.

Wednesday, the 14th day of March, 1883, at Twelve o'clock at noon, at the said Chambers, is appointed for hearing and adjudicating upon the debts or claims.  
 Dated this 20th day of January, 1883.  
 H. F. CHURCH, Chief Clerk.

**TO MINING ENGINEERS.**

**A GENTLEMAN** (29), Associate Royal School of Mines, London, who has served Articles with Mining Engineers, desires APPOINTMENT as ASSISTANT. Three years' practical experience in Coal Mining, also conversant with Metal Mining. Would not object to go abroad to Report on Mines. Speaks French. Best references. No agents.  
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 Special quotations for quantities.  
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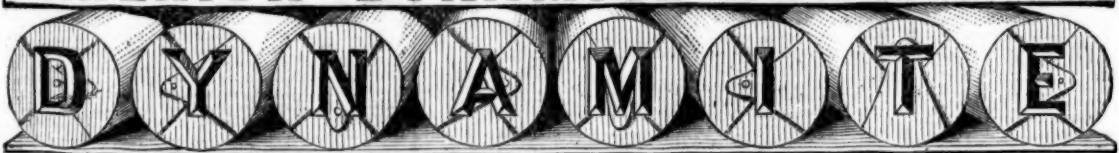
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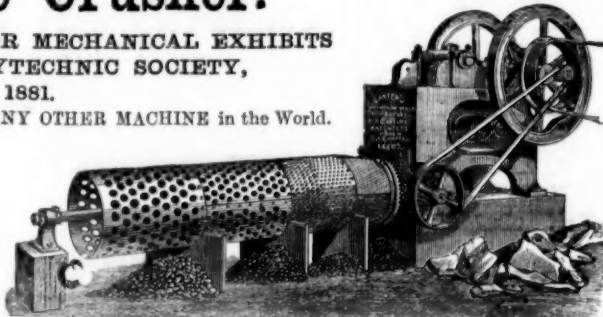
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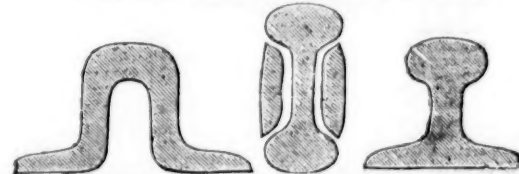
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| 3200 Blue Hills, t, c, St. Agnes                 | 4 6   | 6        | 1         | 1           | 0 4     | 0 2      |
| 6000 Carn Brea, c, t, Illogan                    | 9 7   | 11       | 8 1/2     | 7 1/2       | 0 10    | 0 10     |
| 4000 Cragmant Bach, t, c, Cardigan               | 5 0   | 0        | 0         | 0           | 0 5     | 0 5      |
| 10240 Devon Gt. Consols, c, a, Tavistock         | 1 0   | 0        | 0         | 0           | 0 5     | 0 5      |
| 4296 Dolcoath, c, t, Camborne                    | 10 14 | 10       | 6 1/2     | 5 1/2       | 0 10    | 0 10     |
| 6400 East Pool, t, c, Illogan                    | 0 9   | 9        | 50        | 45          | 0 34    | 0 34     |
| 12500 Frome, t, c, Cardigan (11000 sh. iss.)     | 2 0   | 0        | 0         | 0           | 0 4     | 0 4      |
| 12000 Great Holway, t, c, Flintshire             | 5 0   | 0        | 0         | 0           | 0 5     | 0 5      |
| 15000 Great Laxey, t, c, Isle of Man             | 4 0   | 0        | 0         | 0           | 0 4     | 0 4      |
| 6400 Green Hurth, t, c, Durham                   | 0 0   | 0        | 0         | 0           | 0 5     | 0 5      |
| 20000 Grogwinton, t, c, Cardigan                 | 2 0   | 0        | 0         | 0           | 0 16    | 0 16     |
| 12040 Gunfaike (Glitters), t, c                  | 2 2   | 0        | 0         | 0           | 0 19    | 0 19     |
| 2800 Isle of Man, t, c, Isle of Man              | 25 0  | 0        | 0         | 0           | 0 85    | 0 85     |
| 6000 Killfret, t, c, Chacewater                  | 4 3   | 0        | 0         | 0           | 0 10    | 0 10     |
| 20000 Leadhills, t, c, Lancashire                | 6 0   | 0        | 0         | 0           | 0 18    | 0 18     |
| 4000 Liburne, t, c, Cardiganshire                | 15 15 | 0        | 0         | 0           | 0 614   | 0 614    |
| 10000 Mellanar, t, c, Hayle                      | 2 0   | 0        | 0         | 0           | 0 2     | 0 2      |
| 9000 Miners Mining Co., t, c, Wrexham            | 5 0   | 0        | 0         | 0           | 0 69    | 0 69     |
| 20000 Mining Co. of Ireland, c, t, c             | 7 0   | 0        | 0         | 0           | 0 24    | 0 24     |
| 100000 Mulberry, t, c, Cornwall (26500 sh. iss.) | 1 0   | 0        | 0         | 0           | 0 0     | 0 0      |
| 11829 North Hendre, t, c, Wales                  | 2 10  | 0        | 0         | 0           | 0 3     | 0 3      |
| 8146 Ditto                                       | 1 5   | 0        | 0         | 0           | 0 11    | 0 11     |
| 2000 North Levant, t, c, St. Just                | 13 8  | 0        | 0         | 0           | 0 4     | 0 4      |
| 4760 Penhalig, t, c, St. Agnes                   | 4 0   | 0        | 0         | 0           | 0 17    | 0 17     |
| 18000 Penrhyn, t, c, Cardigan                    | 1 0   | 0        | 0         | 0           | 0 18    | 0 18     |
| 12000 Roman Gravel, t, c, Salop                  | 7 10  | 0        | 0         | 0           | 0 9     | 0 9      |
| 512 South Canford, t, c, St. Cleer               | 1 5   | 0        | 0         | 0           | 0 27    | 0 27     |
| 6123 South Conduff, t, c, Camborne               | 6 5   | 0        | 0         | 0           | 0 9     | 0 9      |
| 9000 South Darren, t, c, Cardigan                | 1 10  | 0        | 0         | 0           | 0 4     | 0 4      |
| 6000 South Wheal Frances, t, c, Illogan          | 9 2   | 0        | 0         | 0           | 0 15    | 0 15     |
| 10000 Tincroft, t, c, Pool, Illogan              | 11 10 | 0        | 0         | 0           | 0 7     | 0 7      |
| 15000 Van, t, c, Llanidloes                      | 4 5   | 0        | 0         | 0           | 0 6     | 0 6      |
| 12000 West Holway, t, c, Flintshire              | 1 0   | 0        | 0         | 0           | 0 1     | 0 1      |
| 512 West Tolgus, t, c, Redruth                   | 99 3  | 0        | 0         | 0           | 0 12    | 0 12     |
| 6000 West Basset, t, c, Illogan                  | 7 0   | 0        | 0         | 0           | 0 4     | 0 4      |
| 6000 West Kitt, t, c, St. Agnes                  | 0 12  | 0        | 0         | 0           | 0 10    | 0 10     |
| 12000 Wheal Crebor, c, Tavistock                 | 2 4   | 0        | 0         | 0           | 0 2     | 0 2      |
| 1024 Wheal Eliza Consols, t, c, Austell          | 18 0  | 0        | 0         | 0           | 0 12    | 0 12     |
| 6000 Wheal Grenville, t, c, Camborne             | 15 0  | 0        | 0         | 0           | 0 7     | 0 7      |
| 4295 Wheal Kitt, t, c, St. Agnes                 | 5 12  | 0        | 0         | 0           | 0 1     | 0 1      |
| 3000 Wheal Pevor, t, c, Redruth                  | 8 1   | 0        | 0         | 0           | 0 4     | 0 4      |

## FOREIGN DIVIDEND MINES.

| Shares.  | Paid.   | Last wk. | Clos. pr. | Total divs. | Per sh. | Last pd. |
|--|---------|----------|-----------|-------------|---------|----------|
| 35500 Alamillos, t, Spain                                | 2 0     | 0        | 0         | 0           | 0 2     | 0 2      |
| 130000 Almada and Tinto Consol., s, t                    | 1 0     | 0        | 0         | 0           | 0 3     | 0 3      |
| 20000 Australian, c, South Australia                     | 7 7     | 0        | 0         | 0           | 0 2     | 0 2      |
| 15000 Birdseye Creek, c, California                      | 4 0     | 0        | 0         | 0           | 0 4     | 0 4      |
| 20000 Cape Copper Mining, t, c, South Africa             | 8 0     | 0        | 0         | 0           | 0 55    | 0 55     |
| 50000 Copalco, c, Chili (24 shares)                      | 3 0     | 0        | 0         | 0           | 0 3     | 0 3      |
| 70000 English and Australian, t, c, St. Aust.            | 2 10    | 0        | 0         | 0           | 0 1     | 0 1      |
| 20000 Ing-Aus, c, Vict., pref. (20000 o.)                | 1 0     | 0        | 0         | 0           | 0 3     | 0 3      |
| 25000 Fortuna, t, Spain                                  | 2 0     | 0        | 0         | 0           | 0 3     | 0 3      |
| 150000 Fronting, t, c, New Granada                       | 2 0     | 0        | 0         | 0           | 0 2     | 0 2      |
| 270,000 Henriett, t, c, Leadville, Colorado              | 1 0     | 0        | 0         | 0           | 0 1     | 0 1      |
| 200000 La Plata, t, c, Leadville                         | 2 0     | 0        | 0         | 0           | 0 1     | 0 1      |
| 15000 Linares, t, Spain                                  | 3 0     | 0        | 0         | 0           | 0 3     | 0 3      |
| 20000 Marbella Iron Ore, t, Spain                        | 10 0    | 0        | 0         | 0           | 0 10    | 0 10     |
| 185164 Mason & Barry, c, Portugal                        | 10 0    | 0        | 0         | 0           | 0 15    | 0 15     |
| 60000 New Quebrada, c, Venezuela                         | 5 0     | 0        | 0         | 0           | 0 4     | 0 4      |
| 10000 Ditto, Debutentes                                  | 100 0   | 0        | 0         | 0           | 0 98    | 0 98     |
| 30000 Oregon, c, Oregon, U.S. (pref. sh.)                | 4 0     | 0        | 0         | 0           | 0 6     | 0 6      |
| 250000 Panuco, t, c, Chili                               | 1 0     | 0        | 0         | 0           | 0 1     | 0 1      |
| 25000 Pitangui, t, c, Brazil (in 6000 £ pd.)             | 0 10    | 0        | 0         | 0           | 0 0     | 0 0      |
| 14000 Pontgibaud, t, c, France                           | 20 0    | 0        | 0         | 0           | 0 11    | 0 11     |
| 100000 Port Phillip, c, Clunes (22 shares)               | 1 0     | 0        | 0         | 0           | 0 14    | 0 14     |
| 50000 Rara Fortuna, t, c, Argent. Republic               | 1 0     | 0        | 0         | 0           | 0 3     | 0 3      |
| 54000 Richmond Consol., t, Nevada                        | 5 0     | 0        | 0         | 0           | 0 7     | 0 7      |
| 24532 Rio Tinto, t, c, Mortgage Bds., Huella             | 100 0   | 0        | 0         | 0           | 0 99    | 0 99     |
| 325000 Ditto, shares                                     | 0 0     | 0        | 0         | 0           | 0 22    | 0 22     |
| 40000 Santa Barbara, t, c, Brazil                        | 0 10    | 0        | 0         | 0           | 0 12    | 0 12     |
| 120000 Scottish Australian Mining Co., t                 | 1 0     | 0        | 0         | 0           | 0 2     | 0 2      |
| 80000 Ditto, New   | 0 10    | 0        | 0         | 0           | 0 1     | 0 1      |
| 22500 Sierra Buttes, c, California                       | 2 0     | 0        | 0         | 0           | 0 1     | 0 1      |
| 4025 Ditto, Plumas Eureka                                | 2 0     | 0        | 0         | 0           | 0 1     | 0 1      |
| 253000 St. John del Rey (25 Stock and multiple dealt in) | 140 100 | 0        | 0         | 0           | 0 5     | 0 5      |
| 160000 Tamarbarrey, t, c, Wynaad                         | 1 0     | 0        | 0         | 0           | 0 6     | 0 6      |
| 91896 Tharsis, t, c, Spain (31000 £ pd.)                 | 10 0    | 0        | 0         | 0           | 0 35    | 0 35     |
| 20000 Tollma, t, c, Colombia (A & B shares)              | 5 0     | 0        | 0         | 0           | 0 9     | 0 9      |
| 25000 Victoria (London), t, c, Australia                 | 1 0     | 0        | 0         | 0           | 0 13    | 0 13     |
| 100000 Victorina (Nevada, U.S.) Deb. Bds.                | 1 0     | 0        | 0         | 0           | 0 2     | 0 2      |
| 5000 Western Andes, t, c, Colombia                       | 5 0     | 0        | 0         | 0           | 0 5     | 0 5      |
| 2100 W. Prussian (5500 pref. sh. £10 pd.)                | 10 0    | 0        | 0         | 0           | 0 10    | 0 10     |
| 54000 Yorke Pen., c, South Aust. Pref.                   | 1 0     | 0        | 0         | 0           | 0 1     | 0 1      |

Have made calls since last dividend was paid.

## NON-DIVIDEND BRITISH MINES.

| Shares.                                     | Paid.     | Last wk. | Clos. pr. |
|---|-----------|----------|-----------|
| 25000 Aberdura, t, Denbigh                  | 1 10      | 0        | 1 1/2     |
| 30000 Alston United, t, c, Cumberland       | 1 0       | 0        | 0         |
| 12000 Anderton, t, c, Devonshire            | 1 0       | 0        | 1 1/2     |
| 12000 Asheton, c, Carnarvonshire            | 5 0       | 0        | 0         |
| 12000 Bedford Unit, t, c, Tavia (21 lib.)   | 0 14      | 0        | 1 1/2     |
| 30000 Bodidra, t, c, Denbighshire           | 1 0       | 0        | 0         |
| 10000 Brada, t, c, Isle of Man              | 1 0       | 0        | 3 1/2     |
| 30000 British, t, c, Wrexham                | 1 0       | 0        | 1 1/2     |
| 30000 Beuno Consols, t, c, Flintshire       | 1 0       | 0        | 2 1/2     |
| 20000 Bwlch United, t, c, Cardigan          | 0 17      | 0        | 1 1/2     |
| 50000 Carn Camborne, t, c, Camborne         | 1 0       | 0        | 1 1/2     |
| 20000 Carnarvon, t, c, Carnarvonshire       | 1 0       | 0        | 1 1/2     |
| 37500 Carnarvonshire Cons., t, c, Llanrwst  | 2 0       | 0        | 1 1/2     |
| 6000 Cathedral Cons., t, c, Gwynedd         | 6 13      | 0        | 1 1/2     |
| 20000 Central Fodale, t, c, Isle of Man     | 1 17      | 0        | 0         |
| 25000 Coed-y-Fedw & Pant-y-Buarth, t, c     | 1 0       | 0        | 1 1/2     |
| 2450 Cook's Kitchen, t, c, Illogan          | 30 14     | 0        | 35        |
| 10000 Cornwall Great Cons., t, c, Cornwall  | 1 0       | 0        | 0         |
| 6400 Crook Burn, t, c, Cumberland           | 0 17      | 0        | 0         |
| 45000 D'Esby Mountain, t, c, Llanrwst       | 0 10      | 0        | 0         |
| 12000 Derwent, t, c, Durham                 | 4 0       | 0        | 1 1/2     |
| 60000 Devon Friendship, t, c, St. Agnes     | 1 0       | 0        | 1 1/2     |
| 12000 Devon Great United (21 shares)        | 1 5       | 0        | 0         |
| 50000 Drakewall, t, c, Calstock             | 0 15      | 0        | 0         |
| 12000 East Blue Hills, t, c, St. Agnes      | 0 5       | 0        | 0         |
| 6000 East Botallack, t, c, St. Just         | 0 14      | 0        | 0         |
| 6144 East Caradon, t, c, St. Cleer          | 4 19      | 0        | 1 1/2     |
| 4000 East Chiverton, t, c, Perranarabola    | 10 12     | 0        | 1 1/2     |
| 11111 East Devon Cons., t, c, Buckfastleigh | 1 0       | 0        | 2 1/2     |
| 30000 East Herodfoot, t, c, Liskeard        | 1 0       | 0        | 1 1/2     |
| 20000 East Long Rake, t, c, Wales           | 1 0       | 0        | 1 1/2     |
| 25000 East Roman Gravel, t, c, Salop        | 1 0       | 0        | 1 1/2     |
| 100 East Tregemio, t, c, Marazion           | 100 0     | 0        | 100       |
| 18000 East Van, t, c, Llanidloes            | 1 0       | 0        | 0         |
| 2048 East Wheal Lovell, t, c, Helston       | 16 8      | 0        | 1 1/2     |
| 100000 East Wheal Rose, t, c, Newlyn East   | 1 0       | 0        | 1 1/2     |
| 12000 Gawton, t, c, Tavistock               | 2 0       | 0        | 0         |
| 40000 Glasgow, t, c, (30000 sh. £1 pd.)     | 1000 15s. | 0        | 15s.      |
| 30000 Gobbett, t, c, Devon                  | 1 0       | 0        | 1 1/2     |
| 10000 Goddards, t, c, Carnarvon             | 1 0       | 0        | 1 1/2     |
| 32000 Goginan, t, c, Cardiganshire          | 1 0       | 0        | 1 1/2     |
| 25000 Goodere, t, c, St. Cleer              | 1 0       | 0        | 1 1/2     |
| 8500 Gorseid and Merilyn Cons., t, c, Flint | 2 10      | 0        | 3 1/2     |
| 20000 Great Dyffryn, t, c, St. Agnes        | 1 0       | 0        | 0         |
| 6000 Great Wharf, t, c, Cornwall            | 1 0       | 0        | 1 1/2     |
| 10000 Gwyn-y-Mynydd, t, c, Flint (pref.)    | 4 0       | 0        | 1 1/2     |
| 70000 Gwydryn Amal, t, c, Carnarvon         | 1 0       | 0        | 0         |
| 12000 Herodfoot, t, c, near Liskeard        | 1 0       | 0        | 1 1/2     |
| 18000 Hington Down, t, c, Calstock          | 0 13      | 0        | 0         |
| 20000 Kirkmichael, t, c, (20000 unissued)   | 1 0       | 0        | 0         |
| 25000 Kit Hill Gt. Cons., t, c, St. Agnes   | 0 17      | 0        | 1 1/2     |
| 15000 Lady Ann, t, c, Llanarmon             | 1 0       | 0        | 0         |
| 25000 Langford, t, c, Cardigan              | 0 10      | 0        | 1 1/2     |
| 15000 Llandegla, t, c, Wales                | 1 0       | 0        | 0         |
| 6120 Lovell, t, c, Wendron                  | 0 18      | 0        | 1 1/2     |
| 8000 Marke Valley, c, Linkinhorne           | 7 7       | 0        | 1 1/2     |
| 6000 Medlyn Moor, t, c, Wendron             | 3 15      | 0        | 1 1/2     |
| 8000 Mona, t, c, Anglesea                   | 5 0       | 0        | 1 1/2     |
| 20000 Mona Consols, t, c, Anglesea          | 2 0       | 0        | 2 1/2     |
| 15000 Monkstoun, t, c, Devon                | 1 0       | 0        | 1 1/2     |
| 20000 Mostyn Consols, t, c, Flint           | 1 0       | 0        | 1 1/2     |
| 12000 Morfa Du, t, c, Anglesea              | 1 0       | 0        | 1 1/2     |
| 60000 Mounts Bay, t, c, Breage              | 1 0       | 0        | 1 1/2     |
| 6144 Mount Carbis, t, c, Redruth            | 1 10      | 0        | 3 1/2     |
| 12000 New Canadon, t, c, St. Cleer          | 5 0       | 0        | 8 1/2     |
| 2400 New Cook's Kitchen, t, c, Illogan      | 8 18      | 0        | 6 1/2     |
| 8000 New Dolcoath, t, c, Camborne           | 3 0       | 0        | 0         |
| 10000 New Great Wheal Vor, t, c, Breage     | 3 0       | 0        | 0         |
| 10000 New Holmbush, t, c, Calstock          | 3 0       | 0        | 0         |
| 8000 New Kitt, t, c, St. Agnes              | 0 18      | 0        | 2 1/2     |
| 12000 New Penrose, t, c, Helston            | 1 0       | 0        | 1 1/2     |
| 15000 New Redmoor, t, c, Calstock           | 1 5       | 0        | 0         |
| 17500 New Terras, t, c, St. Austell         | 7 0       | 0        | 0         |
| 3500 New Tincroft, t, c, Lelant             | 6 0       | 0        | 0         |
| 12000 New Trumpet, t, c, Wendron            | 1 0       | 0        | 1 1/2     |
| 14000 New West Canadon, t, c, Liskeard      | 0 6       | 0        | 1 1/2     |
| 10000 New Wheal Pevor, t, c, Redruth        | 0 6       | 0        | 1 1/2     |
| 35000 New Wye Valley, t, c, Montgomery      | 1 0       | 0        | 1 1/2     |
| 12000 North Blue Hills, t, c, St. Agnes     | 0 2       | 0        | 2 1/2     |
| 5328 North Buay, t, c, Boorrier             | 1 9       | 0        | 3 1/2     |
| 10000 N. D'Esby Mount, t, c, Carnarv.       | 1 0       | 0        | 0         |
| 25000 North Goginan, t, c, Cardiganshire    | 1 0       | 0        | 1 1/2     |
| 6400 North Green Hurth, t, c, (3400 £ pd.)  | 0 8       | 0        | 1 1/2     |
| 25000 North Grogwinton, t, c, Cardigan      | 1 0       | 0        | 1 1/2     |
| 12000 North Herodfoot, t, c, Liskeard       | 0 12      | 0        | 1 1/2     |

## NON-DIVIDEND MINES—continued.

| Shares. |  | Paid. | Last wk. | Clos. pr. |
|---------|--|-------|----------|-----------|
| 50000   | North Moltan, <i>t, c, m, t, Devon</i>             | 1 0   | 0        | —         |
| 6000    | North Penstruthal, <i>t, c, Gwynedd</i>            | 2 11  | 0        | 3/4       |
| 2938    | North Trekerby, <i>t, c, St. Agnes</i>             | 1 0   | 0        | —         |
| 8000    | Northern, <i>t, c, Durham</i>                      | 8 17  | 10       | —         |
| 40000   | Okei Tor, <i>t, c, a, Calstock</i>                 | 1 0   | 0        | —         |
| 80000   | Old Shepherds, <i>t, c, Cornwall</i>               | 1 0   | 0        | 1 1/2     |
| 20000   | Owen Veal & Tregur, <i>t, c, Marazion</i>          | 1 0   | 0        | 1 1/2     |
| 12000   | Pandora, <i>t, c, Carnarvon</i>                    | 2 0   | 0        | —         |
| 45000   | Parys Corporation, <i>t, c, Anglesea</i>           | 1 0   | 0        | 3/4       |
| 7500    | Pateley Bridge, <i>t, c, Yorkshire</i>             | 1 0   | 0        | —         |
| 8000    | Pedin-an-drea, <i>t, c, Redruth</i>                | 3 7   | 0        | 2 1/2     |
| 12000   | Pelyn Wood, <i>c, Llanvilyr</i>                    | 0 2   | 0        | —         |
| 8000    | Pennant, <i>t, bar, North Wales</i>                | 5 0   | 0        | 5 1/2     |
| 20000   | Penegarg, <i>t, Carmarthenshire</i>                | 1 0   | 0        | 1 1/2     |
| 12000   | Pen-y-Orsedd, <i>t, c, Flintshire</i>              | 1 0   | 0        | 1 1/2     |
| 15000   | Perran Consols, <i>t, c, Cornwall</i>              | 1 0   | 0        | 1 1/2     |
| 12000   | Perran Wheal Alfred, <i>c</i>                      | 0 2   | 0        | —         |
| 3000    | Poleroth, <i>t, c, Cornwall</i>                    | 0 12  | 0        | 1 1/2     |
| 10000   | Polroth, <i>c, Cornwall</i>                        | 1 5   | 0        | —         |
| 10000   | Port Nigell, <i>syn, t, c, Carnarv. (4000 sh.)</i> | 1 5   | 0        | —         |
| 6000    | Prince Royal, <i>t, c, s-l, St. Agnes</i>          | 1 0   | 0        | —         |
| 12000   | Prince of Wales, <i>c, s, Calstock</i>             | 0 19  | 0        | —         |
| 15000   | Royalton, <i>t, c, St. Columb</i>                  | 1 0   | 0        | 1 1/2     |
| 35000   | Russell United, <i>c, Tavistock</i>                | 0 15  | 0        | —         |
| 30000   | Silver Hill, <i>c, Callington</i>                  | 1 0   | 0        | 3/4       |
| 50000   | Sincilar, <i>t, b, Whitford</i>                    | 1 0   | 0        | 1 1/2     |
| 40000   | Sorridge, <i>c, Horrabridge</i>                    | 1 0   | 0        | 1 1/2     |
| 6000    | South Carbis, <i>t, c, Redruth</i>                 | 0 10  | 0        | 2 1/2     |
| 42000   | So. Devon Unit, <i>c, Buckfastleigh</i>            | 1 0   | 0        | 1 1/2     |
| 5000    | South Dolcoath, <i>t, c, Illogan</i>               | 0 19  | 0        | —         |
| 6000    | South Penstruthal, <i>t, c, Gwynedd</i>            | 2 13  | 0        | 3/4       |
| 6000    | South Tolcarne, <i>t, c, Camborne</i>              | 5 11  | 0        | 6 1/2     |
| 2043    | South Wheal Crofty, <i>c, Illogan</i>              | 3 4   | 0        | 10 1/2    |
| 40000   | Tamar, <i>s-l, Bessalton</i>                       | 1 0   | 0        | —         |
| 110000  | Tankerville Gt. Consol., <i>t, c, Salop</i>        | 1 0   | 0        | 1 1/2     |
| 20000   | Tin Hill, <i>t, c, St. Stephens</i>                | 1 0   | 0        | 1 1/2     |
| 12000   | Trebartha Lemanne, <i>t, Northill</i>              | 0 1   | 0        | 6 1/2     |
| 6000    | Tregembo, <i>t, c, Cornwall</i>                    | 3     | 0        | —         |
| 100000  | Tresavean, <i>t, c, Gwynedd</i>                    | 1 0   | 0        | 1 1/2     |
| 60000   | Trevarren United, <i>c, Cornwall</i>               | 1 0   | 0        | 1 1/2     |
| 8500    | Trevaunance, <i>t, St. Agnes</i>                   | 0 3   | 0        | 2 1/2     |
| 12000   | Trince Consols, <i>t, c, Gwynedd</i>               | 0 5   | 0        | —         |
| 35000   | Un. Van & Glyn, <i>t, c, (17500 pref. sh.)</i>     | 1 0   | 0        | 3/4       |
| 1000    | Vaughan, <i>t, c, Cardiganshire</i>                | 10    | 0        | —         |
| 8000    | Victor, <i>t, c, Clifton, Flintshire</i>           | 0 14  | 0        | —         |
| 8000    | Victor, <i>c, St. Gwynedd</i>                      | 12    | 0        | 8         |
| 15000   | Vincent, <i>c, Altarnun</i>                        | 1 0   | 0        | —         |
| 12000   | West Assheton, <i>t, Carnarvon</i>                 | 1 0   | 0        | —         |
| 12000   | West Caradon, <i>c, St. Glou.</i>                  | 0 7   | 9        | 1 1/2     |
| 3000    | W. Craven Moor, <i>t, Pateley Bridge</i>           | 10    | 0        | 1 1/2     |
| 12000   | West Crebor, <i>c, Tavistock</i>                   | 1 0   | 0        | 3/4       |
| 10240   | West Devon Consols, <i>c, Calstock</i>             | 1 2   | 0        | 3/4       |
| 10000   | West Godolphin, <i>t, c, Breage</i>                | 1 1   | 0        | 1 1/2     |
| 20000   | West Lisburne, <i>t, Cardigan</i>                  | 1 0   | 0        | 1 1/2     |
| 3000    | West Mary Ann, <i>t, Menhenlot</i>                 | 1 13  | 0        | 1 1/2     |
| 20000   | W. Pateley Bridge, <i>t, Yorkshire</i>             | 1 0   | 0        | —         |
| 12000   | West Phoenix, <i>t, Linkinhorne</i>                | 1 1   | 0        | 3/4       |
| 6000    | West Polbreck, <i>t, St. Agnes</i>                 | 0 5   | 0        | —         |
| 5190    | West Police, <i>St. Day</i>                        | 0 5   | 0        | —         |
| 2048    | West Wheel Frances, <i>t, Illogan</i>              | 94    | 13       | 1 1/2     |
| 3000    | West Wheel Peewer, <i>t, Redruth</i>               | 3 0   | 0        | 7 1/2     |
| 2400    | West Wheel Seton, <i>c, Camborne</i>               | 15    | 0        | 18 1/2    |
| 6000    | Wheal Agar, <i>c, Illogan</i>                      | 16    | 0        | 17 1/2    |
| 6144    | Wheal Bassett, <i>c, Illogan</i>                   | 7 9   | 0        | 8 1/2     |
| 3000    | Wheal Boys, <i>t, Redruth</i>                      | 0 18  | 0        | 1 1/2     |
| 5000    | Wheal Coates, <i>t, c, St. Gwynedd</i>             | 1 0   | 0        | 1 1/2     |
| 2585    | W. Comt., & No. Tres., <i>t, c, Gwynedd</i>        | 0 5   | 0        | 3/4       |
| 50000   | Wheal Elizabeth, <i>t, c, Cornwall</i>             | 2 0   | 0        | 1 1/2     |
| 15000   | Wheal George, <i>t, b, Carnarvon</i>               | 1 0   | 0        | —         |
| 12238   | Wheal Jane, <i>t, Kea</i>                          | 2 4   | 0        | 1 1/2     |
| 12000   | Wheal Jewell, <i>c, St. Hilary</i>                 | 1 0   | 0        | —         |
| 25000   | Wh. Honey and Trelawny, <i>s-l, Lisk.</i>          | 2 0   | 0        | 2 1/2     |
| 12000   | Wheal Ovel, <i>t, Callington</i>                   | 0 23  | 0        | 3/4       |
| 8000    | Wh. Ovel, <i>t, Callington</i>                     | 7 3   | 0        | 8 1/2     |
| 6000    | Wh. Prussia, & Cardew, <i>t, c</i>                 | 1 0   | 0        | 1 1/2     |
| 30000   | Wh. Silver & Lanteglos, <i>s-l, Camelfd.</i>       | 1 0   | 0        | 1 1/2     |
| 4000    | Wheal Sisters, <i>t, Lelant</i>                    | 3     | 10       | 1 1/2     |
| 4036    | Wheal Uny, <i>t, c, Redruth</i>                    | 16    | 19       | 5 1/2     |
| 60000   | Yealand Consols, <i>t, Devonshire</i>              | 0 12  | 0        | 1 1/2     |
| 4000    | Ystwith, <i>t, Cardigan</i>                        | 1 0   | 0        | 3/4       |